

Interim Action Completion Report

Agency Review Draft

Former Jorgensen Forge Property
8531 E. Marginal Way S.
Tukwila, WA 98108

Prepared For:

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List of Acronyms and Abbreviations

DH Environmental	DH Environmental, Inc.
IACR	Interim Action Completion Report
Star Forge Property	Star Forge, LLC Former Jorgensen Forge Facility located at 8531 East Marginal Way South, in Tukwila, Washington
AO	Agreed Order
Star Forge AO	Agreed Order No. DE 21034
Ecology	Washington State Department of Ecology
MTCA	Washington State Model Toxics Control Act
WAC	Washington Administrative Code
LDW	Lower Duwamish Waterway
EMJ	Earle M. Jorgensen Co.
JFC	Jorgensen Forge Corporation
EMJ AO	Agreed Order No. DE 14143
RI	Remedial Investigation
UST	Underground Storage Tank
DWMU	Dangerous Waste Management Unit
IAWP	Interim Action Work Plan
lbs	pounds
TCLP	Toxicity Characteristic Leaching Potential
LNAPL	Light Non-Aqueous Phase Liquid
DRO	diesel-range organics
CDF	controlled density fill
PCUL	preliminary cleanup level
CGI	Construction Group International
AFFF	Aqueous Film Forming Foam
HOT	Heating Oil Tank
PCBs	polychlorinated biphenyls
PQL	Practical Quantitation Limit
mg/kg	milligram per kilogram
AST	aboveground storage tank
ERTS	Environmental Report Tracking System
CFR	code of federal regulations
EPA	Environmental Protection Agency
TSCA	Toxic Substances Control Act
ISGP	Industrial Stormwater General Permit
IDP	Inadvertent Discovery Plan

Section 1: INTRODUCTION

DH Environmental, Inc. (DH Environmental) has prepared this Interim Action Completion Report (IACR) on behalf of Star Forge, LLC (Star Forge), the current owner of the former Jorgensen Forge Facility located at 8531 East Marginal Way South, in Tukwila, Washington (herein referred to as the Property) (Figure 1).

This report has been prepared in accordance with Agreed Order (AO) No. DE 21034 (Star Forge AO), entered into by Star Forge and the Washington State Department of Ecology (Ecology), pursuant to the Washington State Model Toxics Control Act (MTCA) and Cleanup Regulation established in Chapter 173-340 of the Washington Administrative Code (WAC).

1.1 SITE DESCRIPTION

The former Jorgensen Forge Property consists of approximately 21.6 acres located in an industrial area along the east bank of the Lower Duwamish Waterway (LDW). The Property is bordered to the north by Boeing Plant 2, and to the south by the Boeing Isaacson property. It is bordered to the west by the LDW, and to the east by East Marginal Way South and the King County Regional Airport.

The Property was used from 1942-1965 for fabrication of structural steel, tractor, and road equipment, including forging and heat-treating operations conducted for the U.S. Navy. It was owned and operated by Earle M. Jorgensen Co. (EMJ) from 1965 until 1992, when it was purchased by Jorgensen Forge Corporation (JFC). JFC manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. JFC also processed nickel, titanium, and specialized alloys.

Historical industrial use of the Property has contaminated soil and groundwater, including in the vicinity of the USTs described in this report. Star Forge bought the Property out of bankruptcy in November 2016. As part of the bankruptcy proceeding, the bankruptcy court approved a settlement agreement pursuant to which EMJ was required to enter into an agreed order with Ecology to investigate and remediate contaminated soils and groundwater at the Property and any locations where hazardous substances released on the Property have come to be located (the Site). In fulfillment of that requirement, EMJ entered into Agreed Order No. DE 14143 (EMJ AO) with Ecology in 2017. At the time this document was originally submitted to Ecology, EMJ was conducting a Remedial Investigation (RI) of the Site. A draft version of this report and site assessment data were provided to EMJ and Ecology for reference in the RI.

1.2 INTERIM ACTION SCOPE

As required by Section VII.A of the Star Forge AO, the Interim Action included three specific tasks which are described in the following sections. This work was all conducted in conjunction with demolition of the facility structures and subsequent restoration of the Property.

1.2.1 Underground Storage Tank System Permanent Closure by Removal and Site Assessment Sampling

The Property had two Underground Storage Tank (UST) vaults, located in two separate concrete structures (North Tank Vault and South Tank Vault), with a total of 18 UST systems as defined in WAC 173-360A-0150(77). The North Tank Vault included 10 USTs designated as UST-26 through UST-35, and the South Tank Vault included 8 USTs designated as UST-15 through UST-22. All liquids were removed from the USTs in 2020, and all associated media was sampled and designated for disposal. However, at the request of Ecology, the decommissioning of the USTs could not be conducted until an Interim Action Work Plan and AO were approved. In addition, the City of Tukwila also required a demolition permit as structural decommissioning was required for removal. The USTs were all licensed with Ecology and covered under appropriate financial assurance mechanisms until final decommissioning and closure was completed. In accordance with the requirements of the Star Forge AO and WAC 173-360A, a Permanent Closure Report was submitted to Ecology under separate cover in May 2024 (DH Environmental, 2024). The UST Decommissioning and Site Assessment Report is included as Appendix A to this IACR.

1.2.2 Clean Closure of Dangerous Waste Management Units

DH Environmental prepared and submitted an interim Dangerous Waste Clean Closure Report to Ecology for the purpose of documenting the Clean Closure of Dangerous Waste Management Units (DWMUs) at the Property (DH Environmental, 2020a; 2020b, and 2020c) in accordance with WAC 173-303-610(2) and (5). The Clean Closure Report documented removal of Dangerous Waste from the Property and provided updated records of Dangerous Waste Designations of debris, slag, and the concrete and asphalt slabs in each DWMU. The interim Dangerous Waste Clean Closure Report included documentation of all Clean Closure work that could be conducted without obtaining a demolition permit which was ultimately tied to the Interim Action Work Plan (IAWP) and Star Forge AO. After Star Forge acquired all permits and IAWP approvals, the remaining Clean Closure work specified in the IAWP resumed in 2023 in conjunction with demolition of the Property structures. The remaining Clean Closure tasks included demolition of three DWMUs, removal of the underlying slabs, confirmation sampling of the underlying soil, and minor excavation below one of the units to achieve MTCA Method A cleanup standards.

The Final Clean Closure Report was delivered to Ecology under separate cover in May 2024. This report is included as Appendix B to this IACR.

1.2.3 Limited Exposed Soil Removal

Certain areas within the main buildings had exposed soil at grade (i.e. no stockpiles). Star Forge believed that this material was “track-in” from the former forging operations at the Property, or imported aggregate for base course, and/or paver base for equipment pads, walkways, or other in-plant facilities. Prior to demolition in 2019 and 2020, Star Forge, through its contractor Clean Harbors, removed and disposed of approximately 2,500,000-pounds (lbs) of “area wide dust”. The area wide dust “passed” toxicity characteristic leaching potential (TCLP) for RCRA 8 metals. However, the elevated total metals concentration caused the area-wide dust to “book designate” as a Toxic Criteria Dangerous Waste and was assigned Washington State Dangerous Waste number WT02. A fish bioassay was not conducted to refute the book designation by Clean Harbors. Therefore, the WT02 designation was assumed and approximately 2,500,000 lbs of the area wide dust was removed and disposed of as Washington State Toxic Criteria WT02 waste during 2019 and early 2020.

Although most of the area wide dust was removed from inside the buildings prior to demolition, residual dust did remain on some surfaces. Therefore, in June 2020, DH Environmental conducted an area wide statistical analysis of the dust, fine particles, and exposed soil to designate the remaining material so that it could be properly managed during the forthcoming demolition of the structures. Exposed soil, along with area-wide residual dust, was designated as non-dangerous waste if disposal was required (DH Environmental, 2020a). Exposed soil and dust were indistinguishable at the ground surface where pavement was not present or unknown to be present.

During planning for demolition and site stabilization, and at the request of Ecology, exposed soil was identified for potential removal to facilitate surface preparation for the application of asphalt pavement. If required, any soil removal was limited to less than 100 cubic yards, and removal would require consultation with Ecology among other requirements. The areas of unpaved surfaces were mapped by Sound Earth Strategies in 2020 and represented approximately 14,000 square feet within the main building. During demolition, these areas of exposed soil were covered with geomembrane liners to prevent stormwater from contacting the areas of exposed soil.

Through the demolition process, no exposed soil inside the buildings required removal as part of the Interim Action or site demolition work. Because the area wide dust was designated as non-Dangerous Waste, further removal from surfaces was not required and any remaining residual dust was disposed of with the general demolition debris as it was either adhered to structural surfaces or swept up and disposed of during general stormwater BMP maintenance.

Clean fill was imported across the footprint of the former Forge Shop and Melt Shop to restore the grade and achieve proper drainage.

Individual cases of soil removal outside of the building footprints were required for other tasks and are described in Section 4. No exposed soil inside the buildings required removal and off-site disposal, which was a communicated potential outcome.

Section 2: UNDERGROUND STORAGE TANK DECOMMISSIONING AND SITE ASSESSMENT

The purpose of a UST site assessment is to determine if there has been a release of a regulated substance from a UST system. Confirmed and suspected releases have been reported from both former UST vaults as early as 1990 when Dames & Moore first identified elevated levels of petroleum in soil west of the former Aluminum Heat Treat Building and South Tank Vault. Later findings by SEACOR in 1991 supported this when they reported that three USTs in the North Tank Vault failed tightness testing. An additional investigation conducted in 1991 by SEACOR also identified light non-aqueous phase liquid (LNAPL) west of the former South Tank Vault. LNAPL was again identified west of the former North Tank Vault in 1995, along with high concentrations of diesel-range organics (DRO) in soil west of the former South Tank Vault. More recent investigations by Shannon & Wilson also identified likely releases from both former UST vaults, including the presence of a significant LNAPL plume on groundwater west of the South Tank Vault. As described in the Underground Storage Tank Decommissioning and Site Assessment Report, multiple investigations conducted over a 30-year period have identified likely releases from the former North and South Tank vaults at the Site. The site assessment activities described in the UST Decommissioning and Site Assessment Report were conducted pursuant to the Star Forge AO following UST decommissioning by removal. In accordance with the requirements of WAC 173-360A-0730(8)(g)(iii), the results of the site assessment concluded there has been a release of a regulated substance from both the former North and South UST systems at the former Jorgensen Forge Site. The Star Forge AO and IAWP did not require Star Forge to remediate the known subsurface releases, as EMJ is responsible pursuant to the bankruptcy court settlement agreement and the EMJ AO for investigation and remediation of all legacy contamination on the Site.

We recommend the Site Assessment data be considered by Ecology and EMJ during the remedial investigation and final cleanup of the Site. The UST decommissioning and site assessment activities were reported to Ecology under separate cover in May 2024. The Underground Storage Tank Decommissioning and Site Assessment Report is included in Appendix A of this IACR. Financial assurance for the USTs was terminated upon authorization from the Ecology UST program in June 2024 and all 18 tanks have been listed as removed in Ecology's database.

Section 3: CLEAN CLOSURE OF DANGEROUS WASTE MANAGEMENT UNITS

DH Environmental was contracted by Star Forge to assist with facilitation and documentation of Dangerous Waste Clean Closure for the former Jorgensen Forge Facility. From 2020 – 2024, DH Environmental supported Star Forge with facility cleanouts from shops and work areas, DWMU designation and evaluation, DWMU cleaning and confirmation sampling, and overall documentation of Clean Closure activities occurring concurrently with demolition operations. As of May 10th, 2024, Star Forge has completed the required Clean Closure requirements under the Dangerous Waste Regulations (WAC 173-303-200(h)) and in accordance with the Star Forge AO. The 2023 Dangerous Waste Annual Report has been updated to include notification of closure of the three DWMUs described in in the Final Clean Closure Report and is included in Attachment 4 of the report.

The Final Clean Closure Report was delivered to Ecology under separate cover in May 2024. The report is included as Appendix B to this IACR.

Section 4: ADDITIONAL TASKS ASSOCIATED WITH DEMOLITION AND FACILITY CLOSURE

4.1 IMPORT FILL

The facility had multiple subsurface features, including a basement under the main office building, two UST excavations, and multiple equipment vaults. Concurrent with demolition, and with the exception of filling the -2 level of the 5,000 Ton Press Pit with control density fill (CDF) as described in Section 4.2, and the engineered pit covers addressed in Section 4.3, all subsurface features and excavation areas were filled with compacted fill material as specified by a licensed professional engineer and approved by Ecology and the City of Tukwila. All imported crushed rock was sampled in accordance with the Fill Material Sampling Work Plan (SoundEarth, 2020) which was included in the Demolition Plan and referenced in the IAWP.

A total of approximately 29,600 tons of 1-¾ minus crushed rock was imported to the property to fill UST excavations, basement structures, equipment vaults, and other subsurface features. All imported rock was sampled prior to import. The import fill samples were analyzed for chemicals of concern identified in Column B of the Washington State Department of Ecology's Lower Duwamish Waterway Preliminary Cleanup Levels (PCULs) Workbook, Soil Summary page, dated April 5, 2019. The sampling results were compared to the values for the "Most Stringent Soil PCUL Saturated Zone Non-potable GW". A total of 47 soil samples were collected from the fill source facility, ICON Materials, located at 4040 Kersey Way SE, in Auburn, Washington. All sample results confirmed the import fill met the approved specifications. The import fill analytical results summary table, laboratory analytical reports, and the import fill weight summary table are included in Appendix C.

4.2 5,000-TON PRESS PIT

In November 2023, after dewatering of the 5,000-ton press vault located in the Forge Shop area, Star Forge's contractor, Construction Group International (CGI) encountered two levels of subsurface "rooms" adjacent to the press pit that extended approximately 36-feet below ground surface (-1 and -2 levels). The subsurface characteristics of these levels were unknown because they were under water at the start of demolition. The source of the water was likely due to groundwater infiltration after power was cut off from the building and the pumps that had historically kept water out of these rooms ceased to operate in 2019. After evaluating the structural and safety risks of demolishing the floors of each level in order to apply crushed rock as fill, CGI requested to use CDF to fill the void spaces in the -2 level instead of crushed rock because the CDF would be less intrusive, more effective, and safer to apply. The floors were constructed of thick concrete slabs and beams, with primary and secondary reinforcements consisting of rebar up to 2-inches in diameter. The floors/ceilings would have required removal in order to fill and compact the voids with crushed rock. Demolition of these floors would have presented a risk of collapse of the vault sidewalls.

After requesting this IAWP and permit deviation from Ecology and the City of Tukwila, both parties approved use of CDF instead of crushed rock in this application. The CDF was applied to the subsurface rooms from 11/27/2023 - 11/28/2023. Approximately 612 cubic yards of CDF was pumped into the -2 level to bring it up to grade with the floor of the -1 level. The 5,000-ton press pit was still filled with crush rock, along with the -1 floor of the adjacent subsurface structure. Only the bottom, -2 level, of the adjacent rooms was filled with CDF.

The control density fill specifications are included in Appendix C.

4.3 ENGINEERED PIT COVERS

Most of the subsurface vaults/pits at the facility were filled with crushed rock or CDF/crushed rock during the facility demolition process as described in the Demolition Plan and IAWP. However, due to concerns about future access to four former process vaults where Aqueous Film Forming Foam (AFFF) may have been used at the facility, Star Forge met with, and discussed with Ecology an option to install engineered covers over these subsurface features. Star Forge agreed to install water-tight structural covers over four subsurface features at the property. The covers were designed by a licensed structural engineer and were installed over the following subsurface features formerly containing AFFF fire suppression systems, as described in the Ecology-approved, PFAS Investigation Work Plan (Shannon & Wilson, 2022b) prepared pursuant to the EMJ AO:

- 660-ton press control room
- 1,250-ton press control room
- 2,500-ton press control room
- Quench tank vault

These covers are meant to satisfy the City of Tukwila municipal code in the same manner as filling the pits with crushed rock, while also meeting the requirements of WAC 173-340-430(3)(b), a MTCA regulation that states: “If the cleanup action is not known, the interim action shall not foreclose reasonable alternatives for the cleanup action. This is not meant to preclude the destruction or removal of hazardous substances”.

The engineered pit covers have the following features:

- The covers are set on curbs surrounding the entire pit to prevent stormwater run-on/runoff.
- The covers have a waterproof membrane that will prevent direct rain from entering the pits.
- The covers are structurally designed for operational loading (snow loads, wind, personnel, and light equipment).

The pit cover approach was suggested by and was approved by Ecology as detailed in the Section 6 of the IAWP. The engineered pit cover design package was reviewed by Ecology and approved by the City of Tukwila as part of the permitting process for demolition. Photos of the completed and currently installed pit covers are provided in Appendix D – Photo Log of Current Site Conditions.

4.4 HEATING OIL TANK REMOVALS

Two heating oil tanks (HOTs) were removed from the property during the course of demolition and site restoration. The first was a small HOT located west of the former Administrative Building. This HOT was previously identified by Shannon & Wilson as “UST-6”, with a capacity of 600-gallons. The HOT was removed by CGI as part of the demolition of the adjacent Administrative Building in January 2024. The HOT was empty at the time of removal, and there was no visual or olfactory evidence of contamination in soil adjacent to or beneath the former HOT.

The second HOT was discovered on February 22, 2024, in an area formerly used for office space north of the former forge shop. This tank was full of red dyed diesel fuel (heating oil) at the time of discovery. The heating oil was sampled and submitted for analysis of hydrocarbon identification by Method NWTPH-HCID, and polychlorinated biphenyls (PCBs) by EPA Method 8082. The HCID results confirmed the fuel was diesel fuel, and PCBs were not reported in the sample at a concentration greater than the laboratory practical quantitation limit (PQL) of 1 milligram per kilogram (mg/kg). DH Environmental communicated the discovery of the tank to Ecology at the time of discovery, and the tank was pumped out and triple rinsed on February 28, 2024. The product and rinsate were transported for offsite disposal to Marine Vacuum Service on the same day. The laboratory analytical report for the heating oil, the disposal records, and a location map for the HOT are included in Appendix E. CGI removed the tank on February 28, 2024. The tank appeared to be in good condition at the time of removal and no breaches, holes or piercings were observed. No visual or olfactory evidence of contamination was observed in the soil adjacent to or beneath the HOT during removal.

4.5 ABOVE GROUND TANKS REMOVALS

Several above ground storage tanks or hydraulic oil equipment reservoirs were removed from the facility during demolition activities. The first was a 6,000-gallon former hydraulic oil tank located adjacent to the North UST vault. This tank was identified by Shannon & Wilson as “AST-6”. The aboveground storage tank (AST) was empty and was removed for offsite disposal at the same time as the USTs.

The second AST was an 11,000-gallon former lathe cutting oil tank. This tank was located in a subsurface vault in the drive lane between the former Lathe Shop and Administrative Building. This tank was identified by Shannon & Wilson as “UST-1”, however, it is important to note the tank was not a UST. Rather it was an AST, located in a subsurface vault, and subject to visual inspection. These details were communicated with Ecology on several occasions, including via letter to Mr. Drew Imke, a Senior UST Inspector for Ecology, in March 2020 (Marten Law, 2020). This AST was removed on October 11, 2023, after it had been pumped out and triple rinsed by Marine Vacuum Service.

In addition to the two ASTs described above, two hydraulic oil equipment reservoirs were also removed from equipment formerly located in the Arc Furnace Pit. These equipment reservoirs were identified by Shannon & Wilson as “UST-42” and “UST-43”. It is important to note they were

not USTs. Rather, they were reservoirs attached to operating equipment. The equipment and attached reservoirs were removed in October 2023 as part of the demolition and filling of the former Arc Furnace pit.

4.6 TRANSFORMER PCB SPILL CLEANUP

On September 16, 2020, personnel from DH Environmental discovered evidence of vandalism and theft from the facility, including damage to two large transformers in the former powerhouse structure (apparently resulting from an attempt by trespassers to scavenge metal). The damage to one of the transformers, designated TC-24, resulted in a small spill of transformer oil. Transformer TC-24 was located on the east half of the second floor of the former Powerhouse structure. It was estimated that approximately 3- to 5-gallons of transformer oil were spilled from transformer TC-24. PCBs were reported in a sample of the transformer oil at a concentration of 1,400 mg/kg. Assuming the maximum volume of 5-gallons was released, the total mass of PCBs from the spill was 0.05 pounds.

The spill occurred indoors inside the TC-24 transformer room. Some of the transformer oil dripped down through a hatch on the second floor and onto the first-floor slab directly beneath the TC-24 transformer room. No storm drains, sanitary sewers, or soil were impacted by the release. The spill only impacted the east half of the central powerhouse structure, on the first and second floors.

DH Environmental conducted an initial response on September 17th, 2020, and removed and disposed of all free liquid transformer oil and impacted debris that was removable. Due to the physical location of the transformers and the condition of the building in which they were located, the final cleanup actions had to be conducted concurrent with building demolition. As such, final cleanup was written into the facility Demolition Plan and IAWP. Initial notifications to Ecology were made at the time of the incident (Environmental Report Tracking System [ERTS] # 700704).

The final cleanup and disposal of the impacted media, as well as the transformers, was conducted in December 2023 as a Performance Based Cleanup in accordance with chapter 40 code of federal regulations (CFR) § 761.61(b). A Performance Based Disposal Report was delivered to the Environmental Protection Agency (EPA) Region 10 and Ecology on May 30th, 2024 (DH Environmental, 2024c). The report is included in Appendix F of this IACR.

4.7 POWERHOUSE VAULT DISCOVERY, EXCAVATION, AND BACKFILLING

A previously unknown subsurface vault was discovered during demolition activities west of the former Powerhouse structure on December 15, 2023. This vault was located west of the Powerhouse, between the Powerhouse and Lime Storage Hopper, and was subsequently referred to as the “Powerhouse Vault”. The discovery of the Powerhouse Vault was not related to the demolition of the Powerhouse structure itself, or the transformer cleanup described in Section 4.6.

The Powerhouse vault was located beneath an above ground concrete structure, which was sitting on a steel plate, supported by a steel I-beam. During demolition and cleanup of that area, the

equipment operator removed the steel plate and I-beam, exposing the vault underneath. The vault had concrete sidewalls and a concrete bottom and was partially filled with soil and water. An initial waste characterization soil sample was collected from the exposed soil at the west end of the vault and the results indicated the soil contained PCBs at a concentration of 50 mg/kg. A copy of lab report 2312-224 is included in Appendix G. The discovery of the Powerhouse Vault was communicated with Ecology following receipt of the analytical results. Water from the vault was removed by DH Environmental using a vacuum truck and temporarily stored in a frac tank on site. CGI removed all soil from the vault and shipped it for offsite disposal to Chemical Waste Management of Arlington, Oregon, a permitted Subtitle C / Toxics Substances Control Act (TSCA) landfill. Approximately 211.35-tons of soil were disposed of in accordance with the requirements of 40 CFR 761. Disposal records are included in Appendix G.

During excavation of the portion of the vault that extends towards the south, the soil type abruptly changed to a dense gravel material, and the vault appeared to end. As such, a new waste characterization soil sample was collected for PCB analysis, and PCBs were reported at a concentration of 0.14 mg/kg (lab report 2312-300, sample ID 'W. Pwrhouse Vault Soil-2'). Given the low concentration of PCBs at the south end of the vault, no further excavation was conducted, and the vault was backfilled with crushed rock as specified in the demolition plan for other subsurface features at the facility.

4.8 LIME HOPPER RELEASE INCIDENT

On 11/22/2023, an elevated (approximately 25-foot high) lime storage hopper located on the southwest side of the main structure was breached by Star Forge's demolition contractor while cutting into the structure for demolition. The breach resulted in an estimated 500-lbs of lime falling from the vessel onto the ground. No injuries or exposures were reported because of this release and no lime was released into the LDW. However, due to the lime designating as Dangerous Waste, the Washington State Emergency Management Division (1-800-258-5990) was notified in addition to the National Response Center (1-800-424-8802). Beau Johnson, the Ecology Site Manager, was also notified, in addition to the Boeing Environmental Health and Safety manager for the property to the south. The incident was assigned ERTS number 726905. Cleanup of the dispersed lime as well as removal of the existing lime in the storage hopper was completed on December 7, 2023. Further details about the release and cleanup are included in the Final Clean Closure Report included in Appendix B.

4.9 STORMWATER MANAGEMENT

Stormwater from the site drains to the LDW. All stormwater was managed under the requirements of Washington State Industrial Stormwater General Permit (ISGP) WAR003231, Administrative Orders 18074 and 18170, and King County Discharge Authorization # 1122-01 & 02. The Administrative Order required all stormwater to be treated on the site and retained until data is received confirming that the treated batch is in compliance with indicator levels and benchmarks included in the permit and Administrative Orders. Based on hydrology modeling, site rainfall history, and historic site data, Star Forge determined the required storage capacity to maintain an

appropriate volume in storage tanks to collect and retain treated stormwater while awaiting analytical results to determine if stormwater met the applicable water quality parameters.

4.9.1 Stormwater Treatment

The onsite stormwater treatment system included settling tanks, sand filters, enhanced chitosan treatment, and final polishing with a granular activated carbon/proprietary metals treatment media. Monitoring of water quality was conducted per batch of stormwater treated to verify compliance with discharge limits/indicator levels and to monitor treatment media effectiveness and prevent breakthrough prior to media replacement. 104 batches of stormwater were sampled since April 2020, and all batches met the discharge requirements of the ISGP, Administrative Orders and King County discharge authorization. The goal was to discharge all water to the LDW, however due to delays in receiving laboratory results for approval to discharge to LDW, approximately 8.6 million gallons were discharged to King County under discharge authorization 1122-01 and 02.

4.9.2 Post Demolition Stormwater Conveyance System Cleaning

Upon completion of all demolition activities and site paving, the stormwater conveyance system was cleaned as required by the City of Tukwila Demolition Permit and the ISGP. On March 25, 2024, the system cleaning was completed. The system was cleaned via jet rodding and pressure washing to the extent possible utilizing industry standard equipment. All conveyance system cleanout waste was collected, designated, and disposed offsite at properly permitted disposal facilities.

4.9.3 Stormwater Conveyance System Engineering Assessment

As required by the City of Tukwila demolition permit, a third-party engineer from PACLAND performed a site visit on March 15, 2024, to evaluate the condition of the existing site after demolition of buildings and stabilization of the disturbed areas, which consisted of paving/grading operations to direct stormwater runoff to existing storm drainage infrastructure. The evaluation concluded that the storm drainage system is functioning properly. The Engineer Certification Letter is included in Appendix H.

4.9.4 ISGP Termination

Because demolition has been completed and no industrial operations are active at the site, a Notice of Termination of the ISGP was filed by Star Forge and was received on June 10th, 2024. However, due to documented contamination in soil and groundwater at the site, a new Administrative Order (Docket # 22970) was issued on July 25th, 2024, that requires Star Forge to continue treating stormwater at the site to ensure discharges from the site meet Washington State Water Quality Standards. However, batch testing is no longer required as the treatment system has sufficiently demonstrated that the treated discharge meets all indicator levels. Administrative Docket Order # 22970 is included as Appendix I for reference.

4.10 CULTURAL RESOURCE MONITORING

In accordance with the IAWP and State Environmental Policy Act requirements, the demolition and Interim Action work required a Cultural Resources Inadvertent Discovery Plan (IDP) which required archeological monitoring during all ground disturbing activities. Archaeological monitoring pursuant to the IDP was provided by Stell Environmental Enterprises. No significant archaeological resources were discovered during any excavations requiring monitoring during demolition of the Property Structures, or completion of the IAWP. The final Cultural Resources Monitoring Report prepared by Stell Environmental Enterprises is included in Appendix J.

Section 5: CONCLUSIONS

Star Forge has completed all Interim Action work specified in Agreed Order No. DE 21034, and in accordance with the associated IAWP. The Permanent Closure requirements of the UST Systems have been met along with completion of the Clean Closure of the DWMU's. The Permanent Closure UST Site Assessment was prepared and submitted to Ecology in accordance with WAC 173-360A-0810(3) and WAC 173-360A-0730 and Ecology determined that the UST Systems were permanently closed by removal. A Final Dangerous Waste Clean Closure Report was prepared and submitted to Ecology to demonstrate compliance with WAC 173-303-200(h) and WAC 173-303-610 (2) and (5). No significant deviations from IAWP were required other than approved use of control density fill in the 5,000-ton press vault. All notable and/or unanticipated tasks associated with demolition and facility closure outside of the IAWP scope were disclosed to and coordinated with Ecology as well as all appropriate regulatory agencies in concurrence with demolition and property restoration.

Section 6: REFERENCES

- Dames & Moore, 1990. Limited site characterization, Earle M. Jorgensen Company, Seattle, Washington.
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Vicinity Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

02-05-2024

Figure
1

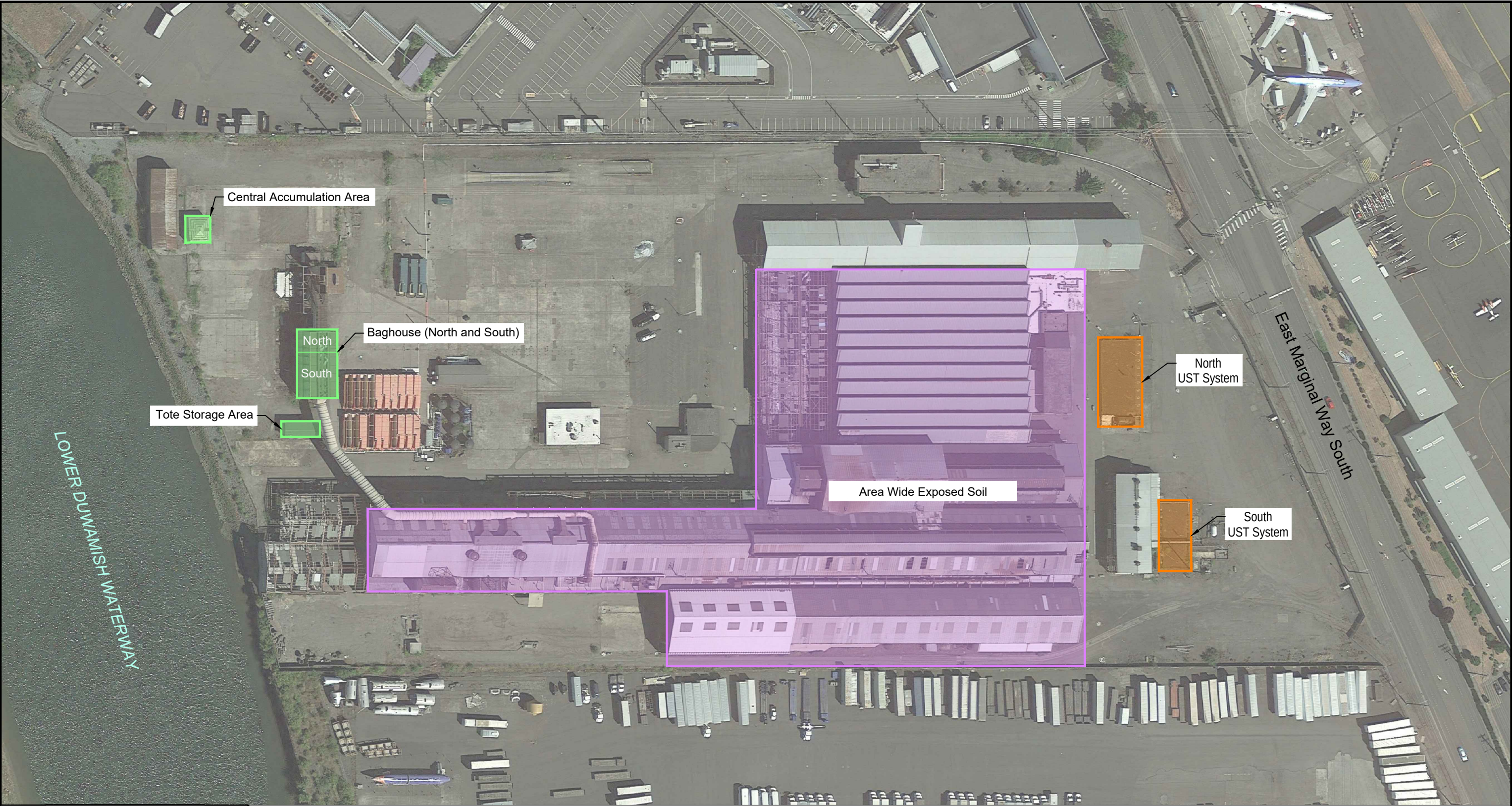
Legend

— Former Jorgensen Forge Property



Background Images Source: Google Earth Pro 5/26/2018

PLOT TIME: 7/12/2021 2:19 PM MOD TIME: 7/12/2021 2:18 PM USER: Kelley Begley DWG: D:\Projects\DH-Star Forge\2021-07-09 STAR FORGE.dwg



Interim Action Work Areas

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA, 98108

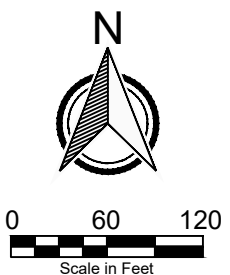
07/12/2021

Figure
2

Legend

-  Former Dangerous Waste Management Units
-  Underground Storage Tank Systems
-  Area Wide Interior Soil and Dust

Note:
1. Aerial Photography Source:
Google Earth Pro, 08/14/2020.



Appendix A

UST Decommissioning and Site Assessment Report

Underground Storage Tank Decommissioning and Site Assessment Report

Former Jorgensen Forge Property
8531 E. Marginal Way S.
Tukwila, WA 98108

Prepared For:

Star Forge, LLC

Prepared By:

DH Environmental, Inc.
1011 SW Klickitat Way
Suite 107
Seattle, Washington



May 8, 2024

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Section 1: INTRODUCTION

DH Environmental, Inc. (DH Environmental) has prepared this Underground Storage Tank (UST) decommissioning and site assessment report on behalf of Star Forge, LLC (Star Forge), the current owner of the former Jorgensen Forge Facility located at 8531 East Marginal Way South, in Tukwila, Washington (herein referred to as the Property) (Figure 1).

This report has been prepared in accordance with Agreed Order No. DE 21034, entered into by Star Forge and the Washington State Department of Ecology (Ecology), pursuant to the Washington State Model Toxics Control Act (MTCA) and Cleanup Regulation established in Chapter 173-340 of the Washington Administrative Code (WAC).

1.1 SITE DESCRIPTION

The former Jorgensen Forge Property consists of approximately 21.6 acres located in an industrial area along the east bank of the Lower Duwamish Waterway (LDW). The Property is bordered to the north by Boeing Plant 2, and to the south by the Boeing Isaacson property. It is bordered to the west by the LDW, and to the east by East Marginal Way South and the King County Regional Airport.

The Property was used from 1942-1965 for fabrication of structural steel, tractor, and road equipment, including forging and heat-treating operations conducted for the U.S. Navy. It was owned and operated by Earle M. Jorgensen Co. (EMJ) from 1965 until 1992, when it was purchased by Jorgensen Forge Corporation (JFC). JFC manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. JFC also processed nickel, titanium, and specialized alloys.

Historical industrial use of the Property has contaminated soil and groundwater, including in the vicinity of the USTs described in this report. Star Forge bought the Property out of bankruptcy in November 2016. As part of the bankruptcy proceeding, the bankruptcy court approved a settlement agreement pursuant to which EMJ was required to enter into an agreed order with Ecology to investigate and remediate contaminated soils and groundwater at the Property and any locations where hazardous substances released on the Property have come to be located (the Site). In fulfillment of that requirement, EMJ entered into Agreed Order No. DE 14143 with Ecology in 2017. At this time, EMJ is conducting a Remedial Investigation (RI) of the Site. This report and site assessment data will be provided to EMJ and Ecology for reference in the RI.

1.2 UNDERGROUND STORAGE TANK SYSTEMS

At the time Star Forge and Ecology entered into Agreed Order No. DE 21034, the Property had 18 remaining USTs located in two separate concrete vaults. The tanks were emptied of liquids, licensed with Ecology, and covered under financial assurance mechanisms. The USTs were

associated with Ecology UST identification number 6163 and were grouped into a North Tank Vault (UST-26 through -35) and a South Tank Vault (UST-15 through -22), as shown in Figures 2 through 4.

To be consistent with previous naming conventions, the names of all tanks referenced in this report follow the naming convention presented by Shannon & Wilson in 2019 (Shannon & Wilson, 2019). A copy of Shannon and Wilson's 2019 figure and naming convention is provided for reference in Appendix A.

The USTs in each tank-bed were buried below grade but within concrete vault structures that extended above grade. Both tank nests were constructed within the basement of former buildings. Once the former buildings were demolished, the voids around the tanks were filled with sand and slag that was available from forging operations on-site. The North Tank Vault included a concrete base that was approximately 5-feet below the surrounding grade. The concrete walls of the South Tank Vault extended slightly deeper and did not contain a concrete bottom.

DH Environmental collected samples from the tank contents and surrounding fill-slag for waste designation purposes in 2020. The contents of the USTs and surrounding fill material was designated as non-hazardous waste (DH Environmental, 2020; DH Environmental, 2020b; DH Environmental 2020c).

1.3 LOCAL GEOLOGY AND HYDROGEOLOGY

The Property is located within the Duwamish/Cedar River valley, part of the Puget Lowland, a regional low-lying trough between the Cascade Range to the east and the Olympic Mountains to the west. The Puget Lowland has largely been filled with sediment deposits left behind by glaciers that advanced and retreated multiple times through the Puget Lowland within the last 2 million years. Sediment within the Duwamish Valley primarily consists of sand and silt which has washed down from Mt. Rainier. This material is often interbedded with layers of silt, clay, and organic soils from localized deposits associated with lakes and ponds that formed along the river valley, or mudflats that formed along Puget Sound. Fill materials were also placed throughout the River Valley since the early 20th century, including in portions of the Property when the Duwamish Waterway was straightened, dredged, and historical channels and embayments were filled.

Shallow subsurface soils at the Property generally consist of a mixture of sand, silty sand, and gravel, to depths up to 24 feet below grade. Fill materials tend to be thickest at the western end of the property along the LDW (Shannon & Wilson, 2022). Soils below the North Tank Vault primarily consisted of brown to gray, fine to medium sand with trace gravel. Shallow soils at the South Tank Vault were similar, while soils below the base of the excavation contained higher amounts of silt and organics, and appeared to be native soils.

Groundwater in the vicinity of the tank vaults, as measured in nearby monitoring wells MW-11, MW-14, and MW-15, has ranged from approximately 10.5- to 12-feet below grade (Shannon & Wilson, 2022). Groundwater flow at the Property generally moves west, but varies depending on the season and proximity to the LDW (Shannon & Wilson, 2022). Groundwater was not encountered during the UST decommissioning activities.

Section 2: UNDERGROUND STORAGE TANK DECOMMISSIONING

This section describes the UST decommissioning activities for the 18 USTs on the Property. The tanks and piping inside the concrete vaults were decommissioned and removed between August 9 and August 17, 2023. The piping outside of the North Tank Vault was removed on August 21 and October 11, 2023. The piping outside of the South Tank Vault was removed on October 11 and 12, 2023.

UST decommissioning activities were overseen by Mr. Brad Reilly with ECI Environmental Services (ECI), under subcontract to the demolition contractor for the project, Construction Group International, of Woodinville, Washington (CGI). Mr. Reilly is certified by the International Code Council for UST Decommissioning. A DH Environmental licensed hydrogeologist was also on site to observe the decommissioning and to perform site assessment activities.

2.1 PRELIMINARY ACTIVITIES

2.1.1 Ecology 30-day Notice

Prior to decommissioning the USTs, Star Forge submitted a 30-Day Notice of Intent to Decommission USTs form to Ecology, as required by WAC 173-360A-0810. A copy of the 30-Day Notice is included in Appendix B.

2.1.2 City of Tukwila Fire Department Permit

The City of Tukwila requires a permit for the permanent closure of USTs. Prior to decommissioning the USTs, Star Forge obtained a Fire Permit for Tank Removal from the City of Tukwila. A copy of Fire Permit F23-0135 is included in Appendix C.

2.1.3 Underground Storage Tank Cleaning

Prior to removal of the USTs, the tanks were cleaned and triple-rinsed by Marine Vacuum Services of Seattle, Washington (MarVac). Rinse certificates are provided in Appendix D.

2.2 UNDERGROUND STORAGE TANK REMOVAL

CGI removed the USTs in both tank vaults between August 9 and August 18, 2023. Once the tanks had been cleaned, the above-ground concrete vault structure and fill materials overlying the tanks were removed. Three USTs in the North Tank Vault, UST-26, -28, and -31, were previously filled with sand. The top of these three tanks were cut open and the sand was removed with an excavator. Residual sand was removed by tilting the tanks on end and dumping the loose sand out. Once the sand had been removed, the empty tanks were removed in the

same manner as the others, by lifting the tanks out of the ground using an excavator. Once removed from the ground, the tanks were scraped and brushed clean to remove any loose soil or debris prior to transport. They were then loaded onto trucks and shipped for recycling as described in Section 2.3. Removal and disposal of the concrete vault structures and backfill materials are also described in Section 2.3.

USTs -26 through -35, in the North Tank Vault, generally appeared in good condition at the time of removal. They were well protected with numerous sacrificial anodes surrounding each tank. The paint on the tank walls was still intact, and no holes or areas of significant corrosion were visible.

USTs -15 through -22, in the South Tank Vault, generally appeared in much worse condition than the tanks from the North Tank Vault. No sacrificial anodes were present on the South Tanks, and significant corrosion and pitting was visible on each tank. In some instances, corrosion holes were visible completely through the tank walls.

Photos of the tank removal work are included in a photo log in Appendix E. Decommissioning certificates are included in Appendix F.

Piping within the concrete vaults of each tank area was removed concurrently with the tanks. The piping was disconnected at each tank prior to the tanks being removed. ECI had a vacuum trailer on site for all piping removal work in the event liquids were present in the piping. No liquids were observed in any of the piping during removal. Removal of the product piping outside of the concrete vaults is described in Sections 2.2.1 and 2.2.2. Site assessment sampling activities are described in Section 3.

2.2.1 Piping Removal – North Tanks

At the North Tank Vault, a 4-inch diameter product pipe extended from the southeast corner of the concrete vault, due south towards the Aluminum Heat Treat Building (Aluminum Building), as shown on Figure 3. This is consistent with as-built drawings for the North Tank Vault. The pipe was exposed and removed on August 21, 2023. The pipe appeared to be a single length pipe without couplers. The pipe ran underneath the north foundation wall of the Aluminum Building where it was cut flush with the foundation wall. No liquids were observed in the pipe when it was cut. Soil from the piping trench was temporarily stockpiled for offsite disposal.

On October 11, 2023, after the Aluminum Building had been demolished, the remaining section of piping was removed. The piping was discovered to have been previously cut and capped approximately 1-foot north of the northern foundation wall of the Aluminum Building. The pipe was bent to form a 90-degree elbow and it had been cut and capped just past the elbow. Based on an interview with a former employee, this pipe had been removed to make room for the installation of the Aluminum Heat Treat Furnace Pit in the mid-1970s. At that time the building

use transitioned from the Powerhouse into use as the Aluminum Heat Treat Building. The product pipe is shown in Photo 7 in the Photo Log in Appendix E.

Soil generated during removal of the last segment of piping was added to the temporary soil stockpile, where it was covered until the product piping had been removed from the South Tank Vault. Disposal of the soil is described in Section 2.3.

2.2.2 Piping Removal – South Tanks

At the South Tank Vault, a single 2-inch diameter product pipe was observed to extend from inside the tank vault, west beneath the Aluminum Building. After the Aluminum Building had been demolished, the piping beneath the slab was exposed and removed on October 11 and 12, 2023. The product piping alignment is shown in Figure 4, and it appears to have been installed so that it was routed around the former Aluminum Heat Treat Furnace Pit.

Consistent with historical drawings of the area, a second pipe, believed to be a fuel return line, was visible in the same trench as the product pipe. A third pipe, believed to be a steam line, was also present. The second and third pipes appeared to have been previously cut approximately 15-feet south of where the first pipe entered the tank vault. A small electrical conduit was also present in the same trench, and all three pipes and the electrical conduit ran west underneath the former Aluminum Building. At the west edge of the Aluminum Building, the piping turned and ran north approximately 15-feet, where it entered a utilidor. The utilidor continued approximately 25-feet north, where it turned and ran west underneath the former drive lane between the main shop building and the aluminum building.

The top of the utilidor was constructed with a concrete slab approximately 12-inches thick. The portion of the slab underneath the drive lane was also covered with a layer of asphalt paving. The concrete lid was broken apart using a hydraulic hammer to expose the product piping in the utilidor. Once exposed, the product lines from the tank vault were observed to enter the utilidor where at least some of them appeared to have been cut and capped. Other lines of unknown purpose were also present in the utilidor, including portions of lines that had been cut or broken at some point prior to the utilidor being exposed. Most of the lines in the utilidor were not labeled, or the labeling was not legible. Some of the lines were still present where the utilidor entered the main shop building, and labeling on the shop ends of the pipes indicated at least two pipes labeled as “fuel oil”, one pipe labeled as “fuel oil return”, one pipe labeled “propane”, and another pipe labeled “compressed air”. More pipe segments were visible in the utilidor than were visible inside the shop building, and the original purpose or contents of these lines are unknown. Photos of the piping removal, including piping in the utilidor, are included in the Photo Log in Appendix E.

CGI cut the rebar from the top of the utilidor to allow access to the underlying piping. ECI had a vacuum trailer on site for the piping removal work in the event liquids were present in the piping. The piping was lifted out of the utilidor using an excavator to slope the piping away from portions that had to be cut with a demolition saw. No liquids were observed in any of the piping

during removal. After the rebar and piping had been cut and removed, the utilidor was emptied of debris in preparation for sampling and backfill.

Rainwater was observed to have accumulated in the utilidor prior to breaking open the concrete lid. The water was confirmed during an inspection of the utilidor by CGI on October 10, 2023, prior to demolition of the utilidor top. Additional rainwater may have also entered during rain events on October 11, 2023, when 0.39 inches of precipitation fell (NOAA, 2024). A slight sheen was present on the water along with a petroleum type odor. A sample of the water was collected using a disposable bailer on October 12, 2023, for waste designation purposes, and the water was removed from the utilidor by ECI using a vacuum trailer. Approximately 275-gallons of water was removed and temporarily stored in a Department of Transportation (DOT) rated shipping tote. Once the water had been removed, CGI crews removed the remaining pieces of concrete debris in preparation for soil sampling and backfilling.

Prior to the utilidor being backfilled, a soil sample was collected beneath the utilidor on October 13, 2023 as part of site assessment activities, as described in Section 3.2. Disposal of the soil, concrete and water generated during piping removal activities are described in Section 2.3

2.3 WASTE DISPOSAL

2.3.1 Underground Storage Tank and Product Piping Disposal

Each of the 18 USTs were loaded onto trucks for transportation to a metal recycling facility. Product piping was combined with rebar from the concrete vault structure and other recyclable materials generated from demolition activities. All scrap metal from the project was disposed of to Sutter Metals in Tacoma, Washington, or Seattle Iron and Metals Corporation, in Seattle, Washington.

2.3.2 Concrete and Soil Disposal

On August 14, 2023, the concrete vault structures were sampled for waste designation purposes. Sampling was conducted to confirm that petroleum or metals that may have leached into the concrete would not designate as hazardous or dangerous waste. The concrete was determined to be non-hazardous waste suitable for disposal to a subtitle D landfill. A copy of the waste designation package is included in Appendix G.

The backfill material consisting of slag, sand, and gravel surrounding the tanks was previously sampled and designated as non-hazardous waste (DH Environmental, 2020). As a result, no further sampling was conducted of the tank backfill, and it was loaded into trucks for offsite disposal. Because the South Tank Vault did not contain a concrete bottom, backfill materials were removed to the depth of the base of the tanks, approximately 8-feet below grade.

Once the tank backfill materials were removed, the concrete vault structures were also removed.

The concrete from the vault structures was processed within the footprint of the respective excavation areas to remove rebar and facilitate loading onto trucks. The rebar was segregated for recycling and the concrete was loaded into trucks for offsite disposal.

Soil and concrete generated during the product piping removal was temporarily stockpiled until all piping removal activities were complete. The soil was sampled for waste designation purposes and determined to be non-hazardous waste, suitable for disposal to a subtitle D landfill. A copy of the piping soil designation package is included in Appendix H.

A total of 4,082.59-tons of soil and concrete were transported for disposal to Roosevelt Regional Landfill, in Roosevelt, Washington. The Roosevelt Landfill is a permitted Subtitle D Landfill operated by Republic Services. A copy of the soil and concrete disposal records is included in Appendix I.

2.3.3 Water Disposal

Analytical results for the tote of water pumped from the South Tank Vault piping utilidor resulted in a waste designation determination that the water was non-hazardous waste. A copy of the waste designation package is included in Appendix J. The water was temporarily stored in a DOT-rated 275-gallon shipping tote until it was pumped out via vacuum truck by DH Environmental on December 4, 2023. Due to the small volume of water, it was combined with water generated during cleaning of several subsurface vaults on the property, unrelated to the UST decommissioning activities. This water was temporarily stored in a 20,000-gallon frac tank, before being disposed of to MarVac in Seattle, Washington in December 2023.

2.4 BACKFILL AND RESTORATION

Following the collection of site assessment samples, described in Section 3, the North and South Tank Vault excavations were backfilled between September 6 and 15, 2023. The base and sidewalls of the excavation were lined with plastic sheeting prior to backfilling. The backfill was placed in lifts and compacted to 95% compaction. Compaction testing was conducted by Krazan and Associates under subcontract to CGI.

Backfill of the product piping trenches and piping utilidor was conducted on October 13, 2023.

Backfill material consisted of 1-1/4" crushed rock sourced from the ICON Materials quarry in Auburn, Washington. Prior to being imported into the Site, all import backfill was tested at the quarry to confirm it met backfill requirements, as specified in the Interim Action Work Plan. Analytical results for the import backfill are reported under separate cover as part of the Interim Action Completion Report.

Paving of the excavation areas and piping trenches was conducted as part of final site restoration in March, 2024.

Section 3: SITE ASSESSMENT SAMPLING

Following removal of the USTs and product piping, site assessment soil samples were collected as described in the following sections. Sample locations are shown in Figures 3 and 4. All confirmation soil samples from the UST vaults were collected from the excavator bucket, with care taken to ensure the sample was not collected from soil in direct contact with the bucket. All soil samples were collected in general accordance with the Ecology-approved Interim Action Work Plan (IAWP; DH Environmental, 2023). Groundwater was not encountered during the tank removal or site assessment sampling activities.

3.1 NORTH TANK VAULT

Site assessment soil samples from the North Tank Vault and associated product piping were collected between August 21 – 30, 2023. Soil samples were collected from the base and sidewalls of the excavation following removal of the concrete vault surrounding the former USTs.

Soil samples from the base of the excavation were collected from an approximate depth of 6.5-feet below grade. This depth was approximately 0.5-feet below the base of the former concrete slab, at the interface with native soil. Soil samples from the sidewall of the excavation were collected from an approximate depth of 5-feet below grade, near the base of the sidewall.

A total of 27 soil samples were collected from the base and sidewalls of the North Tank Vault, including one duplicate sample. A total of three soil samples were collected beneath the piping run from the North Tank Vault. Piping samples were collected by hand, directly from the base of the piping trench following removal of the piping.

The majority of soil samples from the base of the North Tank Vault excavation were collected along the east side of the excavation, beneath the former fill ports of the tanks where releases were most likely to have occurred. One bottom sample, NT-SS-35, beneath the former tank UST-35, was moved to sample soil where a former sump was observed in the concrete vault. This sump was believed to be a feature associated with the former basement structure of the building that the tanks were installed in following building demolition.

Sidewall samples from the North Tank Vault were generally distributed equally around the perimeter of the excavation. Sidewall samples NT-SS-13, NT-SS-14, NT-SS-17, and NT-SS-18, were adjusted to focus on areas where staining was observed. Sidewall sample NT-SS-14 and bottom sample NT-SS-31 were collected near the former fill port for the USTs.

3.2 SOUTH TANK VAULT

Prior to collecting site assessment samples in the South Tank Vault, two test pits were advanced at the north and south ends of the South Tank Vault to investigate for the presence of a concrete

slab. Each test pit was advanced to a depth of 4-feet below the base of the tanks. The test pits confirmed that concrete was not present, which is consistent with as-built records for the South Tank Vault.

Site assessment soil samples from the South Tank Vault and associated product piping were collected between August 22 and October 13, 2023. Soil samples were collected from the base and sidewalls of the excavation following removal of the concrete vault surrounding the former USTs.

Soil samples from the base of the excavation were collected from an approximate depth of 8.5-feet below grade. This depth was approximately 0.5-feet below the base of the former tanks, at the interface with native soil. Soil samples from the sidewall of the excavation were collected from an approximate depth of 6.5-feet below grade, near the base of the sidewall.

A total of 23 soil samples were collected from the base and sidewalls of the South Tank Vault, including one duplicate sample. A total of three soil samples were collected beneath the piping run from the South Tank Vault. Piping samples ST-piping-SS-21 and ST-piping-SS-22 were collected by hand, directly from the base of the piping trench following removal of the piping. Piping sample ST-piping-SS-20 was collected from an excavator bucket, from a depth of 6.5-feet below grade, beneath a utilidor.

All of the soil samples from the base of the South Tank Vault excavation were collected along the west side of the excavation, beneath the former fill ports of the tanks where releases were most likely to have occurred. Sidewall samples from the South Tank Vault were generally distributed equally around the perimeter of the excavation. Sidewall sample ST-SS-15 was collected from stained soil near the former fill port for the USTs.

3.3 SAMPLE LOCATIONS

Site assessment soil sampling locations are shown on Figures 3 and 4. Sample locations were recorded using a mapping grade GPS unit capable of sub-meter accuracy (Trimble GeoXH or Trimble DA2). Where it was not safe to enter an excavation, the sample locations were recorded by surveying the corresponding northing or easting that lined up with each sample.

3.4 SITE ASSESSMENT ANALYTICAL RESULTS

All Site Assessment soil samples were analyzed for diesel-range organics (DRO) by Method NWTPH-Dx and gasoline-range organics (GRO) by Method NWTPH-Gx.

In accordance with the IAWP, and in consultation with Ecology, multiple soil samples were selected for follow-up analysis for the following compounds:

- 1-2, dibromoethane (EDB), 1-2, Dichloroethane (EDC), methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene and xylenes (BTEX) and halogenated VOCs (HVOCs) by EPA Method 8260D,
- Polychlorinated biphenyls (PCBs) by EPA Method 8082, and,
- Carcinogenic Polyaromatic Hydrocarbons (cPAHs) and naphthalenes by EPA Method 8270E/Selected Ion Monitoring (SIM);
- Total RCRA 8 metals plus copper, nickel, and zinc, by EPA Methods 6010D (arsenic, barium, cadmium, chromium, lead, selenium, and silver) and 7471B (mercury).

The samples selected for follow-up analysis were chosen in consultation with Ecology, following review of the initial DRO and GRO data. Of the 15 samples selected for follow-up analysis, MTBE, EDB, EDC, and benzene were not reported in any of the soil samples at a concentration greater than or equal to the practical quantitation limit (PQL). Mercury, selenium and silver were also not reported in any of the soil samples at a concentration greater than or equal to the PQL. PCBs were reported in four samples at a concentration greater than or equal to the PQL, all at a total concentration of less than 1 milligram per kilogram (mg/kg). Naphthalene was reported in most follow-up samples at low concentrations, with the highest concentration reported at 2.9 mg/kg. A discussion of the results for select compounds is described in Sections 3.4.1 through 3.4.5.

The analytical results for DRO, GRO, Toluene, Ethylbenzene, and Xylenes, cPAHs, total metals, and PCBs are summarized in Tables 1 through 6. In each table, a compound was only listed if it was reported in at least one sample at a concentration greater than or equal to the PQL. A copy of the laboratory analytical reports is included in Appendix K.

3.4.1 Diesel- and Gasoline-Range Hydrocarbons

GRO and DRO were reported in soil samples from both the North and South Tank Vaults at elevated concentration.

GRO was reported at a maximum concentration of 480 mg/kg in the North Tank Vault, in sample NT-SS-17-5.0, which was collected along the south sidewall of the excavation. The highest concentration of DRO in the North Tank Vault was reported in the same sample at a concentration of 225,000 mg/kg.

GRO was reported at a maximum concentration of 1,300 mg/kg in the South Tank Vault, in sample ST-SS-8-8.5, which was collected from the base of the excavation at the south end. The highest concentration of DRO in the South Tank Vault was reported at a concentration of 18,000 mg/kg in sample ST-SS-17-6.5, located along the middle of the west sidewall of the excavation. The results for DRO and GRO for the North and South Tank vaults are summarized in Tables 1 and 2, respectively.

3.4.2 Toluene, Ethylbenzene, and Xylenes

Benzene was not reported in any of the site assessment samples at a concentration greater than the PQL. Toluene, ethylbenzene, and xylenes were reported at low concentrations in several samples. The results for Toluene, Ethylbenzene, and Xylenes are summarized in Table 3.

3.4.3 cPAHs

Each of the seven cPAH compounds was reported in one or more of the soil samples selected for follow-up analysis. Soil sample ST-piping-SS-22 contained the highest toxic equivalent concentration (TEC) of benzo(a)pyrene at 0.830 mg/kg. The results for cPAHs are summarized in Table 4.

3.4.4 Metals

Cadmium was only reported in one sample at a concentration greater than the PQL, sample ST-piping-SS-20-6.5, at a concentration of 0.85 mg/kg. This sample was collected beneath the product piping utilidor between the former Aluminum Building and the main shop building.

Arsenic was reported in three samples at a concentration greater than the PQL. The highest concentration of arsenic was reported in sample NT-SS-31-6.5, which was collected from the base of the North Tank Vault, near the midpoint along the east side, at a concentration of 39 mg/kg.

Nickel was elevated in one sample, NT-piping-SS-24, at a concentration of 910 mg/kg. This sample was collected beneath the northernmost product piping sample from the North Tank Vault. The results for total metals are summarized in Table 5.

3.4.5 PCBs

PCBs were reported in four of the follow-up soil samples at a concentration greater than the PQL. The highest concentration was reported in sample NT-piping-SS-24-2.0 at a concentration of 0.52 mg/kg. The results for PCBs are summarized in Table 6.

Section 4: CONCLUSIONS

The purpose of a UST site assessment is to determine if there has been a release of a regulated substance from a UST system. Confirmed and suspected releases have been reported from both former UST vaults as early as 1990 when Dames & Moore first identified elevated levels of petroleum in soil west of the former Aluminum Heat Treat Building (Dames & Moore, 1990). Later findings by SEACOR in 1991 supported this when they reported that three USTs in the North Tank Vault failed tightness testing. An additional investigation conducted in 1991 by SEACOR also identified light non-aqueous phase liquid (LNAPL) west of the former South Tank Vault (SEACOR, 1993 and 1993b). LNAPL was again identified west of the former North Tank Vault in 1995, along with high concentrations of DRO in soil west of the former South Tank Vault (Dames & Moore, 1999). More recent investigations by Shannon & Wilson also identified likely releases from both former UST vaults, including the presence of a significant LNAPL plume on groundwater west of the South Tank Vault (Shannon & Wilson, 2020).

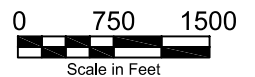
As described above, multiple investigations conducted over a 30-year period have identified likely releases from the former North and South Tank vaults at the Jorgensen Site. The site assessment activities described in this report were conducted pursuant to Agreed Order No. DE 21034 following UST decommissioning by removal. In accordance with the requirements of WAC 173-360A-0730(8)(g)(iii), the results of this site assessment conclude there has been a release of a regulated substance from both the former North and South UST systems at the former Jorgensen Forge Site.

We recommend this information be considered by Ecology and EMJ during the remedial investigation and final cleanup of the Site.

Section 5: REFERENCES

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Vicinity Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

02-05-2024

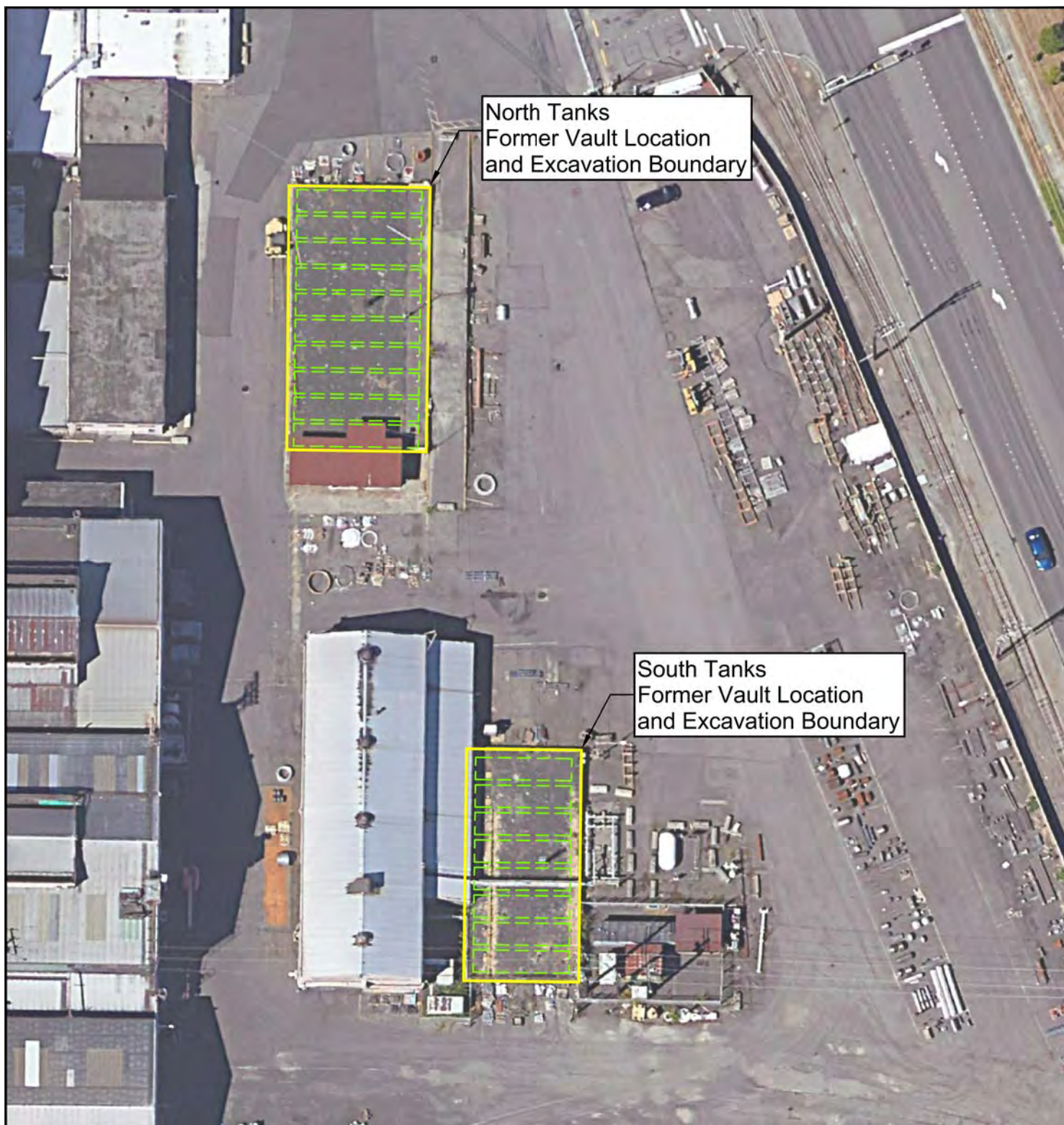
Figure
1

Legend

— Former Jorgensen Forge Property



Background Images Source: Google Earth Pro 5/26/2018



Legend

- Former Underground Storage Tank Location



North & South Tank Vault Location Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

02-05-2024

Figure

2

Background Images Source: Google Earth Pro 5/26/2018





North Tanks Sample Location Map

Former Jorgensen Forge Facility 8531 E. Marginal Way S. Tukwila, Washington	01-26-2024	Figure 3
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Legend

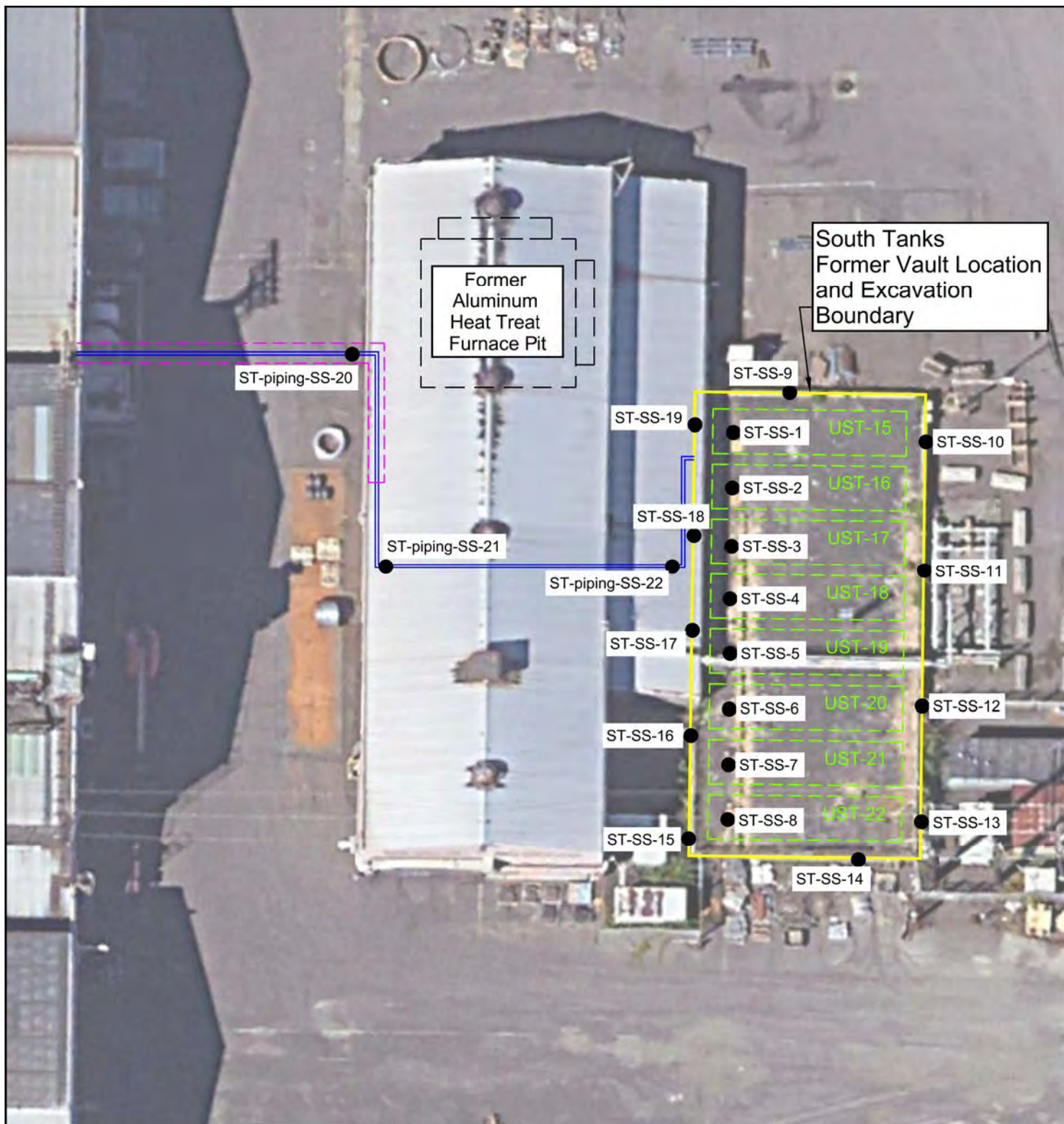
- Soil Sample Location and Designation
- Former Underground Storage Tank Location and Designation
- Former Product Piping Location



Scale in Feet



Background Images Source: Google Earth Pro 5/26/2018





**South Tanks
Sample Location Map**

Former Jorgensen Forge Facility 8531 E. Marginal Way S. Tukwila, Washington	02-05-2024	Figure 4
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Legend

- Soil Sample Location and Designation
- [Green dashed line] Former Underground Storage Tank Location and Designation
- [Pink dashed line] Former Utilidor
- [Blue line] Former Product Piping



Scale in Feet



Background Images Source: Google Earth Pro 5/26/2018

Table 1
Analytical Results Summary Table - GRO & DRO
UST Site Assessment Soil Samples - North Tank Vault
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

Lab Report	Sample Date	Sample Location	Sample ID	GRO	DRO	
2308-250	8/22/2023	North Tank Bottom	NT-SS-29-6.5-082223	4.9 U	57 U	
			NT-SS-30-6.5-082223	5.8 U	58 U	
			NT-SS-31-6.5-082223	80	32,000	
			NT-SS-32-6.5-082223	5.3 U	60 U	
			NT-SS-33-6.5-082223	5.7 U	61 U	
			NT-SS-34-6.5-082223	280	10,800	
			NT-SS-35-6.5-082224	6.5	6,600	
			NT-SS-Dup-1-082223	6.5	14,000	
2308-357	8/30/2023		NT-SS-28-6.5-083023	5.3 U	58 U	
			NT-SS-27-6.5-083023	7.7 U	120	
			NT-SS-26-6.5-083023	4.9 U	56	
2308-315	8/28/2023	North Tank Sidewalls	NT-SS-17-5.0-082823	480	225,000	
			NT-SS-18-5.0-082823	180	23,500	
			NT-SS-19-5.0-082824	6.2 U	66 U	
			NT-SS-16-5.0-082825	6.0 U	60 U	
			NT-SS-15-5.0-082826	110	1,120	
2308-357	8/30/2023		NT-SS-20-5.0-083023	5.2 U	96	
			NT-SS-21-5.0-083023	5.1 U	59 U	
			NT-SS-22-5.0-083024	5.3 U	59 U	
			NT-SS-23-5.0-083024	6.2 U	65 U	
			NT-SS-14-5.0-083025	450	37,900	
			NT-SS-13-5.0-083025	100	51,900	
			NT-SS-12-5.0-083026	5.6 U	56 U	
			NT-SS-11-5.0-083026	7.2 U	69 U	
2308-250	8/21/2023		North Tank Piping	NT-piping-SS-24-2.0-082123	6.4 U	8,900
				NT-piping-SS-25-2.0-082123	5.2 U	399
		NT-piping-SS-26-2.0-082123		4.8 U	120	

Notes:

1. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory practical quantitation limit (PQL)
2. DRO concentrations include the sum of diesel-range and lube oil-range hydrocarbons. If neither diesel-range or lube oil-range hydrocarbons were reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag
3. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Abbreviations

GRO = Gasoline-range organics
DRO = diesel-range organics
mg/kg = milligrams per kilogram

Analytical Methods

GRO by Method NWTPH-Gx
DRO by Method NWTPH-Dx

Table 2
Analytical Results Summary Table - GRO & DRO
 UST Site Assessment Soil Samples - South Tank Vault
 Former Jorgensen Forge Facility
 Tukwila, Washington

all values reported in units of mg/kg

Lab Report	Sample Date	Sample Location	Sample ID	GRO	DRO
2308-250	8/22/2023	South Tank Bottom	ST-SS-8-8.5-082223	1,300	5,300
			ST-SS-7-8.5-082223	5.7 U	3,400
			ST-SS-6-8.5-082223	5.6 U	57
			ST-SS-1-8.5-082223	6.7 U	67 U
			ST-SS-2-8.5-082223	7.3 U	149
			ST-SS-Dup-2-082223	6.4 U	58
2308-357	8/30/2023	South Tank Bottom	ST-SS-3-8.5-083023	56 U	330
			ST-SS-4-8.5-083023	5.8 U	130
			ST-SS-5-8.5-083023	120 U	430
		South Tank Sidewalls	ST-SS-15-6.5-083023	280 U	15,000
			ST-SS-16-6.5-083023	230 U	6,000
			ST-SS-17-6.5-083023	170 U	18,000
			ST-SS-18-6.5-083023	78 U	2,900
			ST-SS-19-6.5-083023	4.7 U	56 U
			ST-SS-9-6.5-083023	5.7 U	66 U
			ST-SS-10-6.5-083023	7.1 U	73 U
			ST-SS-11-6.5-083023	7.1 U	38
			ST-SS-12-6.5-083023	6.6 U	63 U
			ST-SS-13-6.5-083023	8.6 U	80 U
			ST-SS-14-6.5-083023	6.8 U	69 U
2310-177	10/13/2023	South Tank Piping	ST-piping-SS-20-6.5	220	4,260
			ST-piping-SS-21-2.0	4.8 U	380
			ST-piping-SS-22-2.0	4.0 U	190

Notes:

1. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory practical quantitation limit (PQL)
2. DRO concentrations include the sum of diesel-range and lube oil-range hydrocarbons. If neither diesel-range or lube oil-range hydrocarbons were reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag
3. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Abbreviations

GRO = Gasoline-range organics
 DRO = diesel-range organics
 mg/kg = milligrams per kilogram

Analytical Methods

GRO by Method NWTPH-Gx
 DRO by Method NWTPH-Dx

Table 3
Analytical Results Summary Table - Toluene, Ethylbenzene, & Xylenes
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

Location	Sample ID	Toluene	Ethylbenzene	Xylenes
North Tank Bottom	NT-SS-31-6.5-082223	0.0041 U	0.00082 U	0.0084
	NT-SS-34-6.5-082223	0.26 U	0.051 U	0.20
	NT-SS-35-6.5-082224	0.0044 U	0.0021	0.057
	T-SS-Dup-1-082223	0.0048 U	0.0012	0.028
North Tank Sidewalls	NT-SS-17-5.0-082823	0.25 U	0.065	0.54
	NT-SS-18-5.0-082823	0.0047 U	0.15	0.39 J
	NT-SS-13-5.0-083025	0.0046 U	0.00092 U	0.0163
North Tank Piping	NT-piping-SS-24-2.0-082123	0.0058 U	0.0012 U	0.0023 U
South Tank Bottom	ST-SS-8-8.5-082223	0.33	0.80	6.5
	ST-SS-7-8.5-082223	0.0047 U	0.00094 U	0.0096
South Tank Sidewalls	ST-SS-15-6.5-083023	0.21 U	0.085	0.73
	ST-SS-17-6.5-083023	0.22 U	0.044 U	0.087 U
South Tank Piping	ST-piping-SS-20-6.5	0.40	0.46	3.0
	ST-piping-SS-21-2.0	0.0041 U	0.00082 U	0.0012
	ST-piping-SS-22-2.0	0.0037 U	0.00074 U	0.0015 U

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "J" denotes the reported concentration is an estimate
4. Xylenes concentrations include the sum of m,p-xylene and o-xylene. If neither compound was reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag.

Abbreviations

mg/kg = milligrams per kilogram

Analytical Methods

VOCs by EPA Method 8260D

Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Table 4
Analytical Results Summary Table - cPAHs
 UST Site Assessment Soil Samples
 Former Jorgensen Forge Facility
 Tukwila, Washington

all values reported in units of mg/kg

Sample ID	<i>Benzo[a]anthracene</i>	<i>Chrysene</i>	<i>Benzo[b]fluoranthene</i>	<i>Benzo[k]fluoranthene</i>	<i>Benzo[a]pyrene</i>	<i>Indeno[1,2,3-cd]pyrene</i>	<i>Dibenzo[a,h]anthracene</i>	TEC
TEF	0.1	0.01	0.1	0.1	1	0.1	0.1	
NT-SS-31-6.5-082223	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--
NT-SS-34-6.5-082223	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--
NT-SS-35-6.5-082224	0.0078 U	0.0098	0.0097 U	0.0078 U	0.010 U	0.0088 U	0.0078 U	--
T-SS-Dup-1-082223	0.036	0.052	0.093 U	0.015 U	0.10 U	0.026 U	0.015 U	0.004
NT-SS-17-5.0-082823	0.026	0.072	0.041 U	0.020 U	0.033 U	0.031 U	0.036 U	0.003
NT-SS-18-5.0-082823	0.0028	0.0062	0.0045 U	0.0021 U	0.013 U	0.0054 U	0.0022 U	0.000
NT-SS-13-5.0-083025	0.13	0.15	0.097	0.036 U	0.14	0.080	0.036 U	0.172
NT-piping-SS-24-2.0-082123	0.033 UJ	0.038 J	0.056 J	0.062 J	0.033 UJ	0.033 UJ	0.033 UJ	0.012
ST-SS-8-8.5-082223	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--
ST-SS-7-8.5-082223	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--
ST-SS-15-6.5-083023	0.035 U	0.16	0.035 U	0.035 U	0.042	0.035 U	0.035 U	0.044
ST-SS-17-6.5-083023	0.13	0.38	0.046	0.035 U	0.074	0.035 U	0.035 U	0.095
ST-piping-SS-20-6.5	0.030 U	0.071	0.045	0.030 U	0.034	0.030 U	0.030 U	0.039
ST-piping-SS-21-2.0	0.11	0.13	0.18	0.056	0.13	0.16	0.031	0.185
ST-piping-SS-22-2.0	0.57	0.59	0.68	0.23	0.63	0.37	0.088	0.830

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "J" denotes the reported concentration is an estimate
4. "--" indicates a TEC value was not calculated, because none of the individual cPAH compounds were reported at a concentration greater than or equal to the PQL.

Abbreviations

cPAHs = Carcinogenic Polyaromatic Hydrocarbons
 mg/kg = milligrams per kilogram
 TEF = Toxic Equivalent Factor, (WAC 173-340-708)
 TEC = Toxic Equivalent Concentration of benzo(a)pyrene

Analytical Methods

cPAHs by EPA 8270E/SIM
 Analyzed at Onsite Environmental, Redmond, Washington

Table 5
Analytical Results Summary Table - Total Metals
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
NT-SS-31-6.5	39	26	0.58 U	7.2	17	5.8 U	12	19
NT-SS-34-6.5	12 U	24	0.60 U	7.0	11	6.0 U	8.1	21
NT-SS-35-6.5	12 U	27	0.59 U	8.7	12	5.9 U	8.4	25
T-SS-Dup-1	12 U	24	0.59 U	7.8	11	5.9 U	7.7	22
NT-SS-17-5.0	12 U	34	0.59 U	9.3	20	12	18	59
NT-SS-18-5.0	12 U	28	0.62 U	7.7	17	6.2 U	9.4	20
NT-SS-13-5.0	11 U	27	0.54 U	7.9	21	5.4 U	11	23
NT-piping-SS-24-2.0	27	65	0.61 U	100	150	140	910	190
ST-SS-8-8.5	13 U	28	0.63 U	7.9	10	6.3 U	7.6	23
ST-SS-7-8.5	12 U	23	0.62 U	7.7	8.1	6.2 U	6.5	19
ST-SS-15-6.5	11 U	21	0.53 U	7.1	7.8	11	7.5	20
ST-SS-17-6.5	11 U	25	0.53 U	8.3	8.1	5.3 U	8.0	22
ST-piping-SS-20-6.5	31	82	0.85	25	67	49	94	280
ST-piping-SS-21-2.0	11 U	41	0.55 U	55	56	18	64	44
ST-piping-SS-22-2.0	11 U	33	0.55 U	20	30	18	58	43

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.

Abbreviations

mg/kg = milligrams per kilogram

Analytical Methods

arsenic, barium, cadmium, chromium, lead, selenium, and silver by EPA Method 6010D

mercury by EPA Method 7471B

Analyzed at Onsite Environmental, Redmond, Washington

Table 6
Analytical Results Summary Table - PCBs
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

Sample Name	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total PCBs
NT-SS-31-6.5	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	--
NT-SS-34-6.5	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	--
NT-SS-35-6.5	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--
T-SS-Dup-1	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--
NT-SS-17-5.0	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16	0.11	0.059 U	0.059 U	0.27
NT-SS-18-5.0	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.084	0.062 U	0.062 U	0.062 U	0.084
NT-SS-13-5.0	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.13	0.054 U	0.054 U	0.068	0.20
NT-piping-SS-24-2.0	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.29	0.23	0.061 U	0.061 U	0.52
ST-SS-8-8.5	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	--
ST-SS-7-8.5	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	--
ST-SS-15-6.5	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	--
ST-SS-17-6.5	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	--
ST-piping-SS-20-6.5	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	--
ST-piping-SS-21-2.0	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	--
ST-piping-SS-22-2.0	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	--

Notes

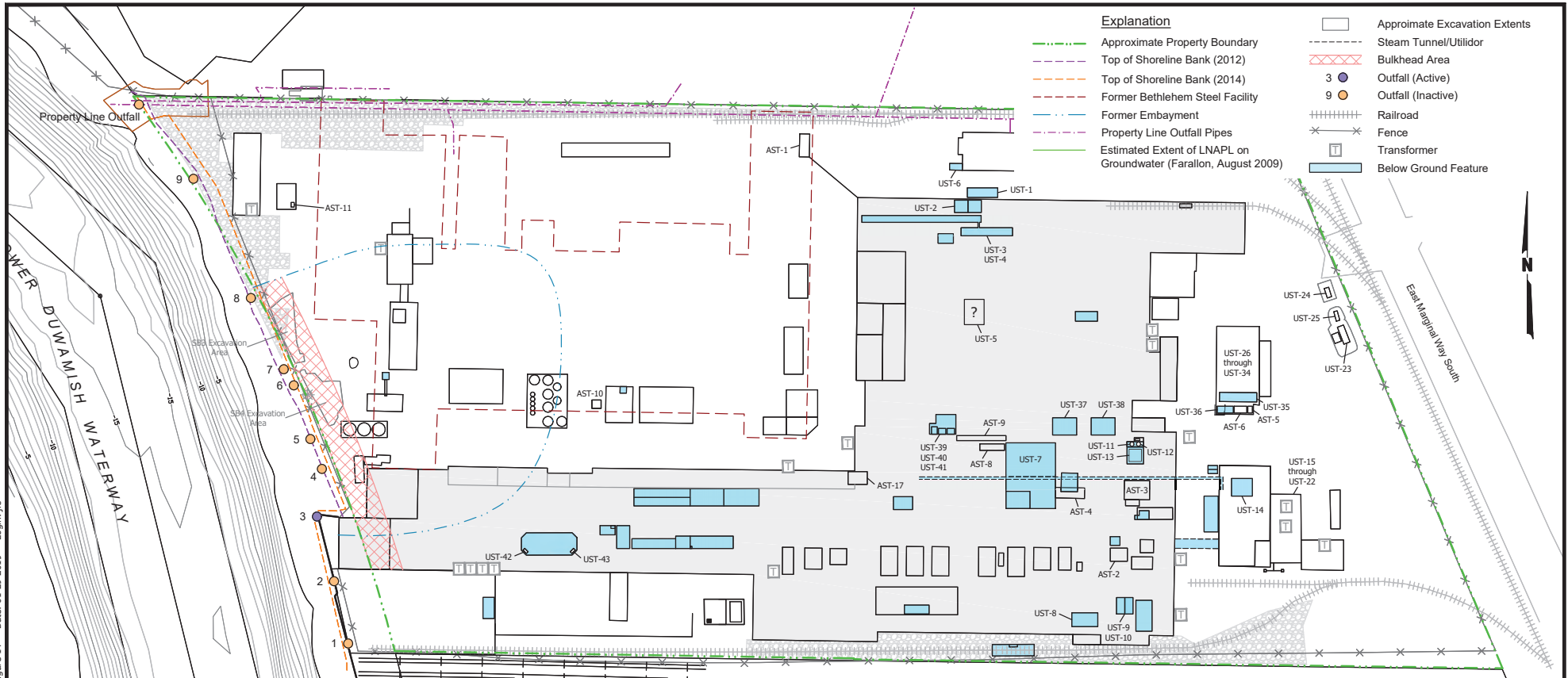
1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "--" indicates none of the individual PCB aroclors were reported at a concentration greater than or equal to the PQL.

Abbreviations

PCB = polychlorinated biphenyl
UST = Underground Storage Tank
mg/kg = milligrams per kilogram

Analytical Methods

PCBs by EPA Method 8082
Analyzed at Onsite Environmental, Redmond, Washington



Tank ID	Description	Containment	Capacity (Gallons)
UST-1	Hollowbore 59/60 Lathes Cutting Oil Holding Tank	V	11,000
UST-2	Hollowbore 59/60 Horizontal Lathes Intermediate Cutting Oil Tank	V	240
UST-3	Hollowbore 58 Horizontal Lathe Clean Cutting Oil Tank	V	5,500
UST-4	Hollowbore 58 Horizontal Lathe Dirty Cutting Oil Tank	V	5,000
UST-5	Tacchi Cutting Oil Tank	V	2,500
UST-6	Office Building Heating Oil UST	G	600
UST-7	5,000-Ton Press Hydraulic Oil Tank	V	4,000
UST-8	Ring Expander Hydraulic Oil Tank	V	300
UST-9	Ring Mill Coolant Tank	V	500
UST-10	Ring Mill Coolant Tank	V	500
UST-11	Quench Tank 5 (Q5)	V	-
UST-12	Quench Tank 6 (Q6)	V	5,000
UST-13	Quench Tank 7 (Q7)	V	-
UST-14	Quench Tank 8 (Q8)	V	-
UST-15 through UST-22	Decommissioned Diesel Storage Area Tanks (8 tanks)	V	96,000
UST-23	Former Regulated Gasoline UST	G	8,000
UST-24	Former Unregulated UST	G	2,000
UST-25	Former Unregulated UST	G	1,000
UST-26 through UST-35	Decommissioned Oil Storage Area Tanks (10 tanks)	V	150,000

UST-36	Waste Oil Tank	V	2,000
UST-37	West Craven Lathe Hydraulic Oil Tank	V	30
UST-38	East Craven Lathe Hydraulic Oil Tank	V	100
UST-39	Quench Tank 1 (Q1)	V	13,000
UST-40	Quench Tank 2 (Q2)	V	13,000
UST-41	Quench Tank 3 (Q3)	V	-
UST-42 and UST-43	Arc Furnace Hydraulic Oil Tank	V	500
UST-43	Arc Furnace Hydraulic Oil Tank	V	500
AST-1	Former Cutting Oil Supply Tank	C	4,000
AST-2	660-Ton Press Hydraulic Oil Tank	C	700
AST-3	1,250-Ton Press Hydraulic Oil Tank	C	1,000
AST-4	L and F Press Hydraulic Oil Tank	C	700
AST-5	Used Oil Centrifuge	C	1,200
AST-6	Clean Hydraulic Oil Tank	C	6,000
AST-7	2,500 Ton Press Hydraulic Oil Tank	C	1,500
AST-8	Quench Tank 4 (Q4)	C	-
AST-9	Quench Tank 9 (Q9)	C	-
AST-10	Former Gasoline AST	C	300
AST-11	Diesel Fuel Tank	C	300

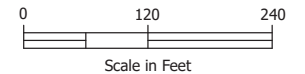
ABBREVIATIONS

AST = Aboveground Storage Tank
 UST = Underground Storage Tank
 V = Within Vault
 C = Within Containment
 G = Directly within Soil
 - = Unknown

DRAFT

NOTE

Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., Dated Jan 24, 2012.



Jorgensen Forge Facility
 8531 East Marginal Way S
 Tukwila, Washington

ASTs AND USTs

January 2019

21-1-12596-010

SHANNON & WILSON, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 14



30-DAY NOTICE

FOR UNDERGROUND STORAGE TANK SYSTEMS

This form provides Ecology 30-days' advanced notice for projects, as required by Chapter 173-360A WAC. Instructions are on the back page.

NWRO
UST ID #: 60163
COUNTY: King
Date: JUN 01 2023

Washington State Department of Ecology
UST Cleanup Program

Please ✓ the appropriate box: ☐ Intent to Install

☒ Intent to Close

☐ Change-in-Service

I. SITE INFORMATION			II. OWNER/OPERATOR INFORMATION		
Tag or UBI # (if applicable): 604 027 650			Owner/Operator Name: Star Forge		
UST ID # (if applicable): 6163			Business Name: Star Forge		
Site Name: Former Jorgensen Forge			Mailing Address: 8531 E. Marginal Way S.		
Site Address: 8531 E. Marginal Way S.			City: Tukwila State: WA Zip: 98108		
City: Tukwila, WA			Phone: Wayne Turk; 206-255-8177		
Phone: Wayne Turk; 206-255-8177			Email: wturk@jorgensenforge.com		
III. CERTIFIED SERVICE PROVIDER(S)					
Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.					
Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.					
1) ☐ Installer ☒ Decommissioner ☐ Site Assessor					
Company Name: Construction Group International			Certification Type: UST Decommissioner		
Service Provider Name: Brad Reilly			Cert. No.: 8289423 Exp. Date: 3/4/2024		
Provider Phone: 425-487-2618			Provider Email: markm@cgius.net		
2) ☐ Installer ☐ Decommissioner ☒ Site Assessor (Mark Marcell, CGI Project Mgr)					
Company Name: DH Environmental, Inc.			Certification Type: WA State Site Assessor		
Service Provider Name: Nathan Moxley			Cert. No.: WA LHG 3024 Exp. Date: 6/7/2024		
Provider Phone: 509-332-9281			Provider Email: nathan.moxley@dhenviro.com		
IV. TANK AND/OR PIPING INFORMATION					
TANK ID	TANK CAPACITY	SUBSTANCE STORED	PIPING INSTALLATION OR REPLACEMENT ONLY (Y/N)	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS
					18 USTs identified on pg 3-6 of attached UST Addendum form. Tanks are empty, and work is approved by Ecology Agreed Order No. DE 21034. Expected start date pending permits from City of Tukwila. Start date will be confirmed 3-days before starting as required by WAC 173-360A-0810(1), and we will keep your office apprised of any scheduling updates.

30-DAY NOTICE

FOR UNDERGROUND STORAGE TANK SYSTEMS

GENERAL INSTRUCTIONS

Under WAC 173-360A-0300, 173-360A-0810 and 173-360A-0820, owners and/or operators are required to notify the Department of Ecology (Ecology) **at least 30 days prior** to beginning underground storage tank (UST) and/or piping installation, decommissioning, or change-in-service projects by mailing this notice to the address below. A separate form must be used for each project type (e.g. install, removal). Once this form is received by Ecology, it is date-stamped and returned to the owner/operator listed on the form. Installation and decommissioning projects cannot begin within the first 30 days after the date stamped on this form unless the wait-period has been waived by a regional Ecology UST inspector. If a project cannot meet the deadlines described below, an additional 30-Day Notice may be required.

Department of Ecology
Underground Storage Tank Section
PO Box 47655
Olympia, WA 98504-7655

SITE AND OWNER/OPERATOR INFORMATION

Fill in the site/owner information completely. The contact person listed on this form must confirm the exact date an installation or decommissioning project will begin by contacting the regional UST inspector **at least 3 business days** before proceeding.

INSTALLATION/REPLACEMENT OF TANK AND/OR PIPING

Installation projects must begin within 90 days of the date stamped on this notice. Complete the Tank Information section by assigning Tank ID numbers that have not previously been used at the facility. Once processed, this form allows a one-time drop of product for UST system testing purposes only. The fuel drop is not required to occur within the 90-day period. Once your tank(s) store more than one inch of product, leak detection equipment and monitoring must be in place.

To receive additional deliveries and operate the new tanks/piping, you must submit the Business License application, UST Addendum, and the tank/piping Manufacturer's Installation Checklists to the Department of Revenue (DOR) **within 30 days** of completing the installation. This activates the mailing of your Business License with tank endorsement(s) from DOR and the facility compliance tag from Ecology.

If only piping is being installed or replaced piping, the ICC-certified installer must certify the installation by completing the Retrofit/Repair Checklist with the Manufacturer's Installation Checklist and submitting it to the owner/operator. The form packet must be submitted by the owner/operator to Ecology **within 30 days** of completing the piping installation.

PERMANENT CLOSURE OF TANK AND/OR PIPING

Decommissioning projects must be completed within 90 days after the date stamped on this returned notice. Complete the Tank Information section using Tank ID numbers listed on the Business License. Use the Comments box to include additional information, such as the date when product was removed from both the piping and the tank to less than one inch.

Contact your local fire marshal and planning department prior to tank closure to procure any permits required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC may also apply.

A site assessment is required at the time of closure. If contamination is not discovered, a site assessment report must be submitted to the above address **within 30 days**. If contamination is discovered or confirmed, it must be reported to the appropriate Ecology regional office **within 24 hours** and a site characterization report must be submitted to the above address **within 90 days**.

The following are some examples of tanks that are exempt from the UST regulations.

- ❖ Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- ❖ Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- ❖ Tanks with a capacity of 110 gallons or less.
- ❖ Emergency overflow tanks, catch basins, or sumps.

If you need this document in a format for the visually impaired, call Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with speech disability, call (877) 833-6341.

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	First Tank	Second Tank	Third Tank	Fourth Tank	Fifth Tank
A Tank name	UST-15	UST-16	UST-17	UST-18	UST-19
B Tank installation date	~ 1942	~ 1942	~ 1942	~ 1942	~ 1942
D Tank material	A	A	A	A	A
E1 Tank construction	A	A	A	A	A
E2 Manifolded tank	A	A	A	A	A
F Tank release detection	O	O	O	O	O
H Tank corrosion protection	O	O	O	O	O
I Spill prevention	O	O	O	O	O
J Overfill protection	O	O	O	O	O
K2 Piping Installation Date	~ 1942	~ 1942	~ 1942	~ 1942	~ 1942
K1 Piping material	A	A	A	A	A
L Piping construction	A	A	A	A	A
M1 Piping release detection (primary)	O	O	O	O	O
M2 Piping release detection (secondary)	J	J	J	J	J
M3 Turbine sump construction	O	O	O	O	O
O1 Piping corrosion protection	O	O	O	O	O
O2 Steel flex connector at tank	J	J	J	J	J
O3 Steel flex connector at dispenser/pump	J	J	J	J	J
P Pumping system	O	O	O	O	O
Compartments	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Q Substance stored	D	D	D	D	D
R Substance use	B	B	B	B	B
S Compartment capacity	12,000	12,000	12,000	12,000	12,000

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	6th Tank	7th Tank	8th Tank	9th Tank	10th Tank								
A Tank name	UST-20	UST-21	UST-22	UST-26	UST-27								
B Tank installation date	~ 1942	~ 1942	~ 1942	~ 1975	~ 1975								
D Tank material	A	A	A	A	A								
E1 Tank construction	A	A	A	A	A								
E2 Manifolded tank	A	A	A	A	A								
F Tank release detection	O	O	O	O	O								
H Tank corrosion protection	O	O	O	O	O								
I Spill prevention	O	O	O	O	O								
J Overfill protection	O	O	O	O	O								
K2 Piping Installation Date	~ 1942	~ 1942	~ 1942	~ 1975	~ 1975								
K1 Piping material	A	A	A	A	A								
L Piping construction	A	A	A	A	A								
M1 Piping release detection (primary)	O	O	O	O	O								
M2 Piping release detection (secondary)	J	J	J	J	J								
M3 Turbine sump construction	O	O	O	O	O								
O1 Piping corrosion protection	O	O	O	O	O								
O2 Steel flex connector at tank	J	J	J	J	J								
O3 Steel flex connector at dispenser/pump	J	J	J	J	J								
P Pumping system	O	O	O	O	O								
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	
Q Substance stored	D			D			D			O			O
R Substance use	B			B			B			G			G
S Compartment capacity	12,000			12,000			12,000			13,500			13,500

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	11th Tank	12th Tank	13th Tank	14th Tank	15th Tank
A Tank name	UST-28	UST-29	UST-30	UST-31	UST-32
B Tank installation date	~1975	~1975	~1975	~1975	~1975
D Tank material	A	A	A	A	A
E1 Tank construction	A	A	A	A	A
E2 Manifolded tank	A	A	A	A	A
F Tank release detection	O	O	O	O	O
H Tank corrosion protection	O	O	O	O	O
I Spill prevention	O	O	O	O	O
J Overfill protection	O	O	O	O	O
K2 Piping Installation Date	~1975	~1975	~1975	~1975	~1975
K1 Piping material	A	A	A	A	A
L Piping construction	A	A	A	A	A
M1 Piping release detection (primary)	O	O	O	O	O
M2 Piping release detection (secondary)	J	J	J	J	J
M3 Turbine sump construction	O	O	O	O	O
O1 Piping corrosion protection	O	O	O	O	O
O2 Steel flex connector at tank	J	J	J	J	J
O3 Steel flex connector at dispenser/pump	J	J	J	J	J
P Pumping system	O	O	O	O	O
Compartments	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Q Substance stored	O	O	O	O	O
R Substance use	G	G	G	G	G
S Compartment capacity	13,500	13,500	13,500	13,500	13,500

UST number
604 027 650

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	16th Tank	17th Tank	18th Tank	19th Tank	20th Tank
A Tank name	UST-33	UST-34	UST-35		
B Tank installation date	~1975	~1975	~1975		
D Tank material	A	A	A		
E1 Tank construction	A	A	A		
E2 Manifolded tank	A		A		
F Tank release detection	O	O	O		
H Tank corrosion protection	O	O	O		
I Spill prevention	O	O	O		
J Overfill protection	O	O			
K2 Piping Installation Date	~1975	~1975	~1975		
K1 Piping material	A	A	A		
L Piping construction	A	A	A		
M1 Piping release detection (primary)	O	O	O		
M2 Piping release detection (secondary)	J	J	J		
M3 Turbine sump construction	O	O	O		
O1 Piping corrosion protection	O	O	O		
O2 Steel flex connector at tank	J	J	J		
O3 Steel flex connector at dispenser/pump	J	J	J		
P Pumping system	O	O	O		
Compartments	1	2	3	1	2
Q Substance stored	O		O	O	
R Substance use	G		G	G	
S Compartment capacity	13,500		13,500	13,500	



City of Tukwila

Department of Community Development

6300 Southcenter Boulevard, Suite #100

Tukwila, Washington 98188

Fire Marshal's Office

Web site: <http://www.TukwilaWA.gov/departments/fire-marshals-office>

FIRE PERMIT

FIRE TANK - TANK REMOVAL OR ABANDONMENT

PERMIT NUMBER:F23-0135

Parcel No: 0001600023 Permit Number: F23-0135
Address: 8531 E MARGINAL WAY S Issue Date: 5/26/2023
Permit Expires On: 11/22/2023

Project Name: Star Forge Tank Removal

Owner:

Name: STAR FORGE LLC

Address: 8531 E MARGINAL WAY S TUKWILA
WA 98108

Contact Person:

Name: Wayne Turk

Phone: (206) 762-1100

Address: 8531 E. Marginal Way S. Tukwila WA
98108

Contractor:

Name: CONST GRP INTERNATIONAL LLC

Phone: (425) 487-2618

Address: 19407 144TH AVE NE BLDG D
WOODINVILLEWA 98072

License No: CONSTGI953NA

Expiration Date: 8/10/2023

DESCRIPTION OF WORK:

Decommission, by removal, 18 USTs and 2 ASTs

Project Valuation: \$200,000.00 Fees Collected: \$8,400.00

Type of Fire Protection: Sprinklers:
Fire Alarm:

Type of Construction:
Electrical Service Provided by: Tukwila

Occupancy per IBC:
Water District: Tukwila
Sewer District: Tukwila

Fees Collected:

Electrical Service Provided by:
Water District:
Sewer District:

Current Codes adopted by the City of Tukwila:

International Fire Code Edition:	2018		
International Building Code Edition:	2018	National Electrical Code:	2020
International Residential Code Edition:	2018	WA Cities Electrical Code:	2020
International Mechanical Code Edition:	2018	WAC 296-46B:	2020
Uniform Plumbing Code Edition:	2018	WA State Energy Code:	2018
International Fuel Gas Code:	2018		

All provisions of law and ordinances governing this work will be complied with, whether specified herein or not.

The granting of this permit does not presume to give authority to violate or cancel the provisions of any other state or local laws regulating construction or the performance of work.

This permit shall become null and void if the work is not commenced within 180 days for the date of issuance, or if the work is suspended or abandoned for a period of 180 days from the last inspection.

PERMIT CONDITIONS:

1: FIRE CONDITIONS

- A site investigation/assessment is required prior to taking a tank permanently out of service.
- TANKS MAY BE REMOVED ONLY AFTER FIRE DEPARTMENT INSPECTION.
- Two (2) 20 BC portable fire extinguishers are to be on site within 50 ft. of the operation.
- Work area shall be cordoned off or be enclosed in a fenced yard.
- "No Smoking" signs must be posted in readily visible locations.
- Remove all flammable or combustible liquids from tank and from connecting lines.
- Tanks shall be inerted and must be certified gas free by a Marine Chemist or Petroleum Industry Safety Engineer regularly engaged in that business, prior to removal.
- All exterior above-grade fill and vent piping shall be permanently removed.
- Tanks shall be disposed of in accordance with federal, state and local regulations.
- Call twenty-four (24) hours prior to removal to arrange the required fire department inspections.

PERMIT INSPECTIONS REQUIRED

TANK REMOVAL FINAL [____]

Comment _____ Date _____

International Fire Code Edition:
International Building Code Edition:
International Residential Code Edition:
International Mechanical Code Edition:
Uniform Plumbing Code Edition:
International Fuel Gas Code:

2018
2018
2018
2018
2018
2018

National Electrical Code:
WA Cities Electrical Code:
WAC 296-46B:
WA State Energy Code:

2020
2020
2020
2018

All provisions of law and ordinances governing this work will be complied with, whether specified herein or not.

The granting of this permit does not presume to give authority to violate or cancel the provisions of any other state or local laws regulating construction or the performance of work.

This permit shall become null and void if the work is not commenced within 180 days for the date of issuance, or if the work is suspended or abandoned for a period of 180 days from the last inspection.

copy Earl Bush (COT)

PERMIT CONDITIONS:

1: FIRE CONDITIONS

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- Tanks shall be inerted and must be certified gas free by a Marine Chemist or Petroleum Industry Safety Engineer regularly engaged in that business, prior to removal.
- All exterior above-grade fill and vent piping shall be permanently removed.
- Tanks shall be disposed of in accordance with federal, state and local regulations.
- Call twenty-four (24) hours prior to removal to arrange the required fire department inspections.

PERMIT INSPECTIONS REQUIRED

TANK REMOVAL FINAL 

Comment Fire final Passed Date 8/17/23

Earl Bush PSRFA

Earl Bush

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, WA 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

MARINE VACUUM SERVICE, INC. TANK WASH CERTIFICATE

Tank Size: 10 X 15,000 Gallon Tanks

Last Contents: DIESEL

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been cleaned in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.

M.V.S. Representative: 

Date: AUGUST 9 – 14, 2024

***** This certificate does not certify the tank or space for hot work.

DBE # D4M1302341

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # D4M1302341

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, WA 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

MARINE VACUUM SERVICE, INC. TANK WASH CERTIFICATE

Tank Size: 8 X 12,000 Gallon Tanks

Last Contents: DIESEL

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been cleaned in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.

M.V.S. Representative: 

Date: AUGUST 9 – 14, 2024

***** This certificate does not certify the tank or space for hot work.

DBE # D4M1302341

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # D4M1302341

Appendix E - Photo Log
UST Decommissioning and Site Assessment Report
Former Jorgensen Forge Property



Photo 1: North Tank Vault, exposing UST-26 in preparation for removal. View to the west.



Photo 2: North Tank Vault, exposing UST-28 in preparation for removal. View to the west.



Photo 3: North Tank Vault, last two tanks prepared for removal. View to the south southwest.



Photo 4: North Tank Vault, tanks staged for transport. The tank fragments on the left side were tanks previously filled with sand, which were cut open to empty. View to the north.



Photo 5: North Tank Vault, loading a tank for recycling. View to the southwest.



Photo 6: North Tank Vault, emptied of tanks and backfill, prior to removal of the concrete vault. View to the northwest.



Photo 7: North Tank Vault, product piping removal. View to the north northwest.



Photo 8: North Tank Vault, southernmost end of the product piping. The piping had been cut just inside the foundation wall of the aluminum building. A cap was still present on the end of the pipe.



Photo 9: North Tank Vault, removal of the concrete vault structure. View to the north.



Photo 10: North Tank Vault, backfilling the tank excavation. View to the west northwest.



Photo 11: North Tank Vault, following final paving and site restoration. View to the south southwest.



Photo 12: South Tank Vault, removal of UST-15. View to the southwest.



Photo 13: South Tank Vault, tank prepared for removal. View to the west.



Photo 14: South Tank Vault, tank staged for transport. Note the condition of the tanks from the South Tank Vault in comparison to those from the North Tank Vault. View to the west.



Photo 15: South Tank Vault, loading a tank for recycling. View to the west.



Photo 16: South Tank Vault, example of a pinhole caused by corrosion. These were visible on multiple tanks.



Photo 17: South Tank Vault, emptied of tanks and backfill, prior to removal of the concrete vault. View to the south southwest.



Photo 18: South Tank Vault, backfilling the excavation. View to the south southwest.



Photo 19: South Tank Vault, single product line visible entering the foundation underneath of the former Aluminum Building, along with a small electrical conduit. View to the north northeast.



Photo 20: South Tank Vault, product line running from left to right (north to south), where it joins two other lines that used to stub up through the concrete slab floor. Those lines appeared to have been cut and bent at some point in the past. View to the east.



Photo 21: South Tank Vault, product piping running north towards a utilidor. View to the north.



Photo 22: South Tank Vault, product piping in the utilidor following removal of the concrete top. Note there are more pipes visible in the utilidor than were visible running towards the former tanks. Several of the pipes had been cut and/or capped at some point in the past. View to the south southwest.



Photo 23: South Tank Vault, product piping in the utilidor following removal of the concrete top. Note there are more pipes visible in the utilidor than were visible running towards the former tanks. Several of the pipes had been cut and/or capped at some point in the past. View to the south southwest.



Photo 24: South Tank Vault, following final paving and site restoration. View to the south.



Practical Environmental Compliance Solutions

Offices In: Anchorage | Tacoma | Portland

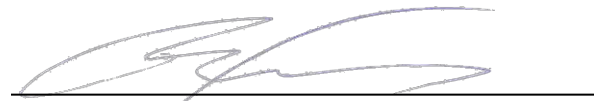
September 6 , 2023
ECI Project No.: 0520-40

Underground Storage Tank Decommissioning Certification

This is a statement of Underground Storage Tank Decommissioning provided by EcoCon, Inc. (ECI). ECI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). Following Puget Sound Regional Fire Department certification, the USTs were excavated and transported off site and disposed at a local recycling facility.

Project Client:	CGI, Inc.
Project Name:	Jorgensen Forge
Project Address:	8531 E. Marginal Way S, Tukwila, WA 98108
Type of Decommissioning:	Excavation and removal from sub-surface
UST Installation Date:	Unknown
UST Decommissioning Date:	August 14, 2023
Permit Issuance Date:	May 26, 2023
UST(s) Total Gallons:	10-13,500g Heating oil
UST(s) Construction:	Steel Single Wall Construction
Tank Numbers:	26, 27, 28, 29,30, 31, 32, 33, 34, 35

Certified UST Decommissioner:	Brad Reilly
Certification Number:	8289423– Exp: 03/04/2024



Brad N. Reilly

September 6. 2023

Date



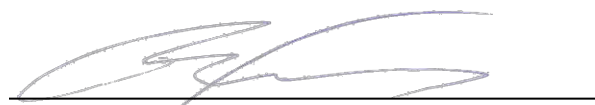
September 6 , 2023
ECI Project No.: 0520-40

Underground Storage Tank Decommissioning Certification

This is a statement of Underground Storage Tank Decommissioning provided by EcoCon, Inc. (ECI). ECI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). Following Puget Sound Regional Fire Department certification, the USTs were excavated and transported off site and disposed at a local recycling facility.

Project Client:	CGI, Inc.
Project Name:	Jorgensen Forge
Project Address:	8531 E. Marginal Way S, Tukwila, WA 98108
Type of Decommissioning:	Excavation and removal from sub-surface
UST Installation Date:	Unknown
UST Decommissioning Date:	August 14, 2023
Permit Issuance Date:	May 26, 2023
UST(s) Total Gallons:	8-12,000g Heating oil
UST(s) Construction:	Steel Single Wall Construction
Tank Numbers:	15, 16, 17, 18, 19, 20, 21, 22

Certified UST Decommissioner:	Brad Reilly
Certification Number:	8289423– Exp: 03/04/2024



Brad N. Reilly

September 6. 2023

Date



DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site – UST Vault Concrete

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Tank Vault Concrete

Generation Process: Concrete Removal

RCRA ID Number that waste will be managed under:

NA

Total Quantity and/or Estimated Generation rate:

~ 300 cubic yards

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☒ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☐ Liquid (If liquid, indicate if the liquid is:
☐ Single Layer
☐ Multi-layer

pH: ☐ < 2 [D002]
☐ > 2 but < 12.5
☒ N/A ☐ > 12.5 [D002]

Flashpoint: ☐ < 140 °F [D001]
☐ > 140 °F but < 200 °F
☒ N/A ☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals
			☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L
☐ Ignitable [D001]	☒ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic: ☒ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium: 70 ☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium: ☒ ND
☐ Toxic [D004 – D043]	☐ ≥ 2 ppm and < 50 ppm	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium: 23 ☐ ND
List Here:	[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Lead ≥ 5.0 mg/L [D008]	Copper: 75 ☐ ND
	☐ ≥ 50 ppm [TSCA Regulated]	☐ Mercury ≥ 0.2 mg/L [D009]	Lead: ☒ ND
	☐ < 1 ppm	☐ Selenium ≥ 1.0 mg/L [D010]	Mercury: ☒ ND
	Note:	☐ Silver ≥ 5.0 mg/L [D011]	Nickel: 430 ☐ ND
	IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	Check if: ☐ Assumed	Selenium: ☒ ND
		☐ TCLP Conducted	Silver: 5 ☐ ND
		☒ TCLP Not Conducted	Zinc: 47 ☐ ND
		Comments:	Comments:

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Concrete	90-100
Misc debris	0 - 10



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100. The calculated equivalent concentration value was greater than 0.001%, resulting in an initial criteria waste designation of WT02. A follow-up fish bioassay was performed in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*, which resulted in zero mortality, which refutes the initial WT02 designation. **This waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2308-161 and 2308-161B)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solid

Designation Performed by: Nathan Moxley, LHG
Title: Senior Geologist

Date: 08-28-2023

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Manager

Date: 08-28-2023

Project: Jorgensen Tank Vault Concrete
Waste Stream: Concrete
Sample IDs: N. Tanks Concrete
Sample Date: 8/14/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as			mg/kg	Conversion Factor	1 mg/kg = 10^-4 %				
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	Concentration (mass %)			
					A	B	C	D	
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	70	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	23	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C			2.30E-03		
Copper	7440-50-8	75	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A	7.50E-03				
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C					
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	430	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C				4.30E-02	
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	5	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X	5.00E-04				
Zinc	7440-66-6	47	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B		4.70E-03			
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C					
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Total (SUM)					0.0005000	0.0075000	0.0047000	0.0023000	0.0430

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	5.00E-04	7.50E-03	4.70E-03	2.30E-03	4.30E-02	0.0013036	WT02
	5.00E-04	7.50E-04	4.70E-05	2.30E-06	4.30E-06		

Sources

- 1 RTECS: Registry of Toxic Effects of Chemical Substances
- 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
- 3 ECOTOX Database: United States Environmental Protection Agency



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 17, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge WO-1
Laboratory Reference No. 2308-161

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 15, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
Samples Submitted: August 15, 2023
Laboratory Reference: 2308-161
Project: Star Forge WO-1

Case Narrative

Samples were collected on August 14 and 15, 2023 and received by the laboratory on August 15, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D (Solid) Analysis

Method 5035A VOA vials were not provided for sample N. Tanks Concrete. The sample was therefore extracted from a 4-ounce jar. Some loss of volatiles may have occurred.

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for sample N. Tanks Concrete due to sample matrix effects. The sample was reanalyzed with similar results.

The percent recovery for Methylene Chloride is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Total Metals EPA 6010D/7471B Analysis

The sample result is reported on a wet weight basis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Dichlorodifluoromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chloromethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Vinyl Chloride	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromomethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Chloroethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Trichlorofluoromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Acetone	ND	0.019	EPA 8260D	8-15-23	8-15-23	
Iodomethane	ND	0.013	EPA 8260D	8-15-23	8-15-23	
Carbon Disulfide	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methylene Chloride	ND	0.016	EPA 8260D	8-15-23	8-15-23	
(trans) 1,2-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methyl t-Butyl Ether	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Vinyl Acetate	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
2,2-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
(cis) 1,2-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Butanone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Bromochloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chloroform	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,1-Trichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Carbon Tetrachloride	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Benzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Trichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Dibromomethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromodichloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Chloroethyl Vinyl Ether	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
(cis) 1,3-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methyl Isobutyl Ketone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Toluene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
(trans) 1,3-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,2-Trichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Tetrachloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Hexanone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Dibromochloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromoethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,1,2-Tetrachloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Ethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
m,p-Xylene	ND	0.0039	EPA 8260D	8-15-23	8-15-23	
o-Xylene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Styrene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromoform	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Isopropylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,2,2-Tetrachloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
n-Propylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Chlorotoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
4-Chlorotoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3,5-Trimethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
tert-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trimethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
sec-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
p-Isopropyltoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,4-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
n-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromo-3-chloropropane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Hexachlorobutadiene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Naphthalene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Surrogate:		Percent Recovery	Control Limits			
Dibromofluoromethane	27	75-130				Q,
Toluene-d8	109	78-128				
4-Bromofluorobenzene	98	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chloromethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromomethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Chloroethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Acetone	ND	0.010	EPA 8260D	8-15-23	8-15-23	
Iodomethane	ND	0.0068	EPA 8260D	8-15-23	8-15-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methylene Chloride	ND	0.0080	EPA 8260D	8-15-23	8-15-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Vinyl Acetate	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Butanone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chloroform	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Benzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Toluene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	



Date of Report: August 17, 2023
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 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S2					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Hexanone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-15-23	8-15-23	
o-Xylene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Styrene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromoform	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
n-Propylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
tert-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
sec-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
n-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Naphthalene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0815S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0587	0.0577	0.0500	0.0500	117	115	30-160	2	26	
Chloromethane	0.0469	0.0443	0.0500	0.0500	94	89	59-131	6	26	
Vinyl Chloride	0.0530	0.0524	0.0500	0.0500	106	105	68-136	1	23	
Bromomethane	0.0672	0.0701	0.0500	0.0500	134	140	48-155	4	32	
Chloroethane	0.0530	0.0511	0.0500	0.0500	106	102	67-141	4	16	
Trichlorofluoromethane	0.0577	0.0565	0.0500	0.0500	115	113	76-127	2	19	
1,1-Dichloroethene	0.0573	0.0564	0.0500	0.0500	115	113	75-129	2	19	
Acetone	0.0536	0.0583	0.0500	0.0500	107	117	49-158	8	37	
Iodomethane	0.0367	0.0397	0.0500	0.0500	73	79	37-140	8	27	
Carbon Disulfide	0.0474	0.0455	0.0500	0.0500	95	91	41-143	4	19	
Methylene Chloride	0.0584	0.0688	0.0500	0.0500	117	138	60-124	16	18	I
(trans) 1,2-Dichloroethene	0.0559	0.0544	0.0500	0.0500	112	109	79-133	3	15	
Methyl t-Butyl Ether	0.0586	0.0569	0.0500	0.0500	117	114	73-125	3	17	
1,1-Dichloroethane	0.0548	0.0559	0.0500	0.0500	110	112	79-125	2	17	
Vinyl Acetate	0.0517	0.0545	0.0500	0.0500	103	109	51-145	5	41	
2,2-Dichloropropane	0.0619	0.0605	0.0500	0.0500	124	121	79-126	2	18	
(cis) 1,2-Dichloroethene	0.0565	0.0560	0.0500	0.0500	113	112	75-131	1	15	
2-Butanone	0.0510	0.0594	0.0500	0.0500	102	119	54-145	15	32	
Bromochloromethane	0.0567	0.0552	0.0500	0.0500	113	110	80-126	3	15	
Chloroform	0.0567	0.0562	0.0500	0.0500	113	112	80-123	1	15	
1,1,1-Trichloroethane	0.0575	0.0564	0.0500	0.0500	115	113	78-124	2	21	
Carbon Tetrachloride	0.0604	0.0619	0.0500	0.0500	121	124	74-127	2	18	
1,1-Dichloropropene	0.0583	0.0551	0.0500	0.0500	117	110	80-123	6	15	
Benzene	0.0577	0.0560	0.0500	0.0500	115	112	80-122	3	18	
1,2-Dichloroethane	0.0580	0.0552	0.0500	0.0500	116	110	75-124	5	15	
Trichloroethene	0.0554	0.0575	0.0500	0.0500	111	115	80-129	4	18	
1,2-Dichloropropane	0.0537	0.0552	0.0500	0.0500	107	110	80-123	3	15	
Dibromomethane	0.0529	0.0543	0.0500	0.0500	106	109	80-123	3	15	
Bromodichloromethane	0.0555	0.0572	0.0500	0.0500	111	114	80-129	3	15	
(cis) 1,3-Dichloropropene	0.0572	0.0589	0.0500	0.0500	114	118	80-130	3	15	
Methyl Isobutyl Ketone	0.0532	0.0611	0.0500	0.0500	106	122	63-137	14	27	
Toluene	0.0512	0.0534	0.0500	0.0500	102	107	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0553	0.0562	0.0500	0.0500	111	112	80-124	2	15	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0815S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0524	0.0518	0.0500	0.0500	105	104	80-120	1	15	
Tetrachloroethene	0.0541	0.0529	0.0500	0.0500	108	106	77-126	2	15	
1,3-Dichloropropane	0.0500	0.0517	0.0500	0.0500	100	103	77-123	3	15	
2-Hexanone	0.0492	0.0535	0.0500	0.0500	98	107	53-137	8	29	
Dibromochloromethane	0.0547	0.0556	0.0500	0.0500	109	111	80-128	2	16	
1,2-Dibromoethane	0.0512	0.0529	0.0500	0.0500	102	106	80-122	3	20	
Chlorobenzene	0.0505	0.0510	0.0500	0.0500	101	102	80-120	1	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0523	0.0500	0.0500	105	105	80-120	1	15	
Ethylbenzene	0.0516	0.0518	0.0500	0.0500	103	104	80-120	0	15	
m,p-Xylene	0.101	0.104	0.100	0.100	101	104	80-120	3	15	
o-Xylene	0.0502	0.0507	0.0500	0.0500	100	101	80-120	1	15	
Styrene	0.0514	0.0534	0.0500	0.0500	103	107	80-122	4	15	
Bromoform	0.0566	0.0574	0.0500	0.0500	113	115	78-126	1	15	
Isopropylbenzene	0.0520	0.0524	0.0500	0.0500	104	105	80-125	1	15	
Bromobenzene	0.0476	0.0510	0.0500	0.0500	95	102	79-124	7	15	
1,1,2,2-Tetrachloroethane	0.0490	0.0521	0.0500	0.0500	98	104	75-122	6	17	
1,2,3-Trichloropropane	0.0498	0.0541	0.0500	0.0500	100	108	72-125	8	20	
n-Propylbenzene	0.0485	0.0502	0.0500	0.0500	97	100	77-126	3	16	
2-Chlorotoluene	0.0471	0.0501	0.0500	0.0500	94	100	75-128	6	15	
4-Chlorotoluene	0.0496	0.0508	0.0500	0.0500	99	102	78-127	2	16	
1,3,5-Trimethylbenzene	0.0489	0.0514	0.0500	0.0500	98	103	77-128	5	15	
tert-Butylbenzene	0.0483	0.0498	0.0500	0.0500	97	100	73-130	3	20	
1,2,4-Trimethylbenzene	0.0489	0.0514	0.0500	0.0500	98	103	77-125	5	16	
sec-Butylbenzene	0.0493	0.0504	0.0500	0.0500	99	101	75-130	2	17	
1,3-Dichlorobenzene	0.0497	0.0525	0.0500	0.0500	99	105	78-123	5	17	
p-Isopropyltoluene	0.0499	0.0514	0.0500	0.0500	100	103	75-130	3	18	
1,4-Dichlorobenzene	0.0501	0.0516	0.0500	0.0500	100	103	77-121	3	17	
1,2-Dichlorobenzene	0.0490	0.0516	0.0500	0.0500	98	103	80-120	5	15	
n-Butylbenzene	0.0509	0.0528	0.0500	0.0500	102	106	76-131	4	20	
1,2-Dibromo-3-chloropropane	0.0563	0.0614	0.0500	0.0500	113	123	61-137	9	28	
1,2,4-Trichlorobenzene	0.0515	0.0559	0.0500	0.0500	103	112	77-127	8	17	
Hexachlorobutadiene	0.0507	0.0545	0.0500	0.0500	101	109	77-125	7	22	
Naphthalene	0.0515	0.0555	0.0500	0.0500	103	111	68-129	7	19	
1,2,3-Trichlorobenzene	0.0516	0.0555	0.0500	0.0500	103	111	77-124	7	19	
Surrogate:										
Dibromofluoromethane					103	99	75-130			
Toluene-d8					106	112	78-128			
4-Bromofluorobenzene					100	101	71-130			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromomethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	6.4	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	7.3	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	1.0	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	5.0	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	90	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	100	78-125				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	LP-water					
Laboratory ID:	08-161-03					
Dichlorodifluoromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride (SIM)	ND	0.20	EPA 8260D/SIM	8-16-23	8-16-23	
Bromomethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	64	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	73	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	10	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	10	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	50	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	20	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	10	EPA 8260D	8-16-23	8-16-23	



Date of Report: August 17, 2023
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 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	LP-water					
Laboratory ID:	08-161-03					
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,2-Trichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	20	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	4.0	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	10	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	10	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	10	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	10	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	91	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	98	78-125				



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride (SIM)	ND	0.020	EPA 8260D/SIM	8-16-23	8-16-23	
Bromomethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	6.4	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	7.3	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	1.0	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	5.0	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	1.0	EPA 8260D	8-16-23	8-16-23	



Date of Report: August 17, 2023
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 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>88</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD		SB	SBD			
Dichlorodifluoromethane	9.83	10.0	10.0	10.0		98	100	34-166	2	21
Chloromethane	10.3	10.6	10.0	10.0		103	106	63-138	3	18
Vinyl Chloride	10.8	10.9	10.0	10.0		108	109	71-135	1	20
Bromomethane	9.19	11.1	10.0	10.0		92	111	20-151	19	36
Chloroethane	9.11	9.45	10.0	10.0		91	95	76-125	4	20
Trichlorofluoromethane	9.44	9.87	10.0	10.0		94	99	75-131	4	19
1,1-Dichloroethene	9.23	9.33	10.0	10.0		92	93	78-125	1	19
Acetone	7.83	8.55	10.0	10.0		78	86	76-125	9	18
Iodomethane	6.84	7.49	10.0	10.0		68	75	10-155	9	40
Carbon Disulfide	8.90	8.60	10.0	10.0		89	86	58-129	3	17
Methylene Chloride	8.74	8.89	10.0	10.0		87	89	80-120	2	15
(trans) 1,2-Dichloroethene	9.27	9.51	10.0	10.0		93	95	80-125	3	17
Methyl t-Butyl Ether	9.15	9.26	10.0	10.0		92	93	80-122	1	15
1,1-Dichloroethane	9.20	9.27	10.0	10.0		92	93	80-125	1	17
Vinyl Acetate	9.23	9.07	10.0	10.0		92	91	80-131	2	15
2,2-Dichloropropane	11.3	11.6	10.0	10.0		113	116	80-146	3	21
(cis) 1,2-Dichloroethene	9.64	9.91	10.0	10.0		96	99	80-129	3	17
2-Butanone	8.77	9.06	10.0	10.0		88	91	80-129	3	16
Bromochloromethane	9.59	9.59	10.0	10.0		96	96	80-125	0	18
Chloroform	9.23	9.29	10.0	10.0		92	93	80-123	1	16
1,1,1-Trichloroethane	9.09	9.39	10.0	10.0		91	94	80-123	3	18
Carbon Tetrachloride	9.12	9.35	10.0	10.0		91	94	80-126	2	17
1,1-Dichloropropene	9.20	9.42	10.0	10.0		92	94	80-126	2	18
Benzene	9.30	9.42	10.0	10.0		93	94	80-121	1	16
1,2-Dichloroethane	9.07	9.07	10.0	10.0		91	91	80-124	0	15
Trichloroethene	9.22	9.51	10.0	10.0		92	95	80-122	3	18
1,2-Dichloropropane	9.52	9.73	10.0	10.0		95	97	80-123	2	15
Dibromomethane	9.87	9.77	10.0	10.0		99	98	80-123	1	15
Bromodichloromethane	10.2	10.4	10.0	10.0		102	104	80-125	2	15
(cis) 1,3-Dichloropropene	11.1	11.3	10.0	10.0		111	113	80-129	2	15
Methyl Isobutyl Ketone	9.65	9.71	10.0	10.0		97	97	80-124	1	15
Toluene	8.78	8.89	10.0	10.0		88	89	80-120	1	18
(trans) 1,3-Dichloropropene	10.9	10.9	10.0	10.0		109	109	80-134	0	17



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	10.5	10.7	10.0	10.0	105	107	77-126	2	20	
Tetrachloroethene	9.89	9.44	10.0	10.0	99	94	80-124	5	18	
1,3-Dichloropropane	10.3	10.4	10.0	10.0	103	104	80-120	1	15	
2-Hexanone	9.47	10.1	10.0	10.0	95	101	80-130	6	16	
Dibromochloromethane	9.43	9.94	10.0	10.0	94	99	80-128	5	15	
1,2-Dibromoethane	10.7	11.1	10.0	10.0	107	111	80-127	4	15	
Chlorobenzene	10.4	10.6	10.0	10.0	104	106	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.0	11.4	10.0	10.0	110	114	80-125	4	17	
Ethylbenzene	10.4	10.7	10.0	10.0	104	107	80-125	3	18	
m,p-Xylene	20.9	21.4	20.0	20.0	105	107	80-127	2	18	
o-Xylene	10.3	10.6	10.0	10.0	103	106	80-126	3	18	
Styrene	10.9	11.1	10.0	10.0	109	111	80-130	2	17	
Bromoform	11.4	11.5	10.0	10.0	114	115	80-130	1	15	
Isopropylbenzene	10.6	11.0	10.0	10.0	106	110	80-129	4	18	
Bromobenzene	10.7	11.6	10.0	10.0	107	116	76-128	8	16	
1,1,2,2-Tetrachloroethane	12.0	12.6	10.0	10.0	120	126	74-130	5	15	
1,2,3-Trichloropropane	10.8	11.4	10.0	10.0	108	114	71-129	5	25	
n-Propylbenzene	11.6	12.2	10.0	10.0	116	122	80-129	5	19	
2-Chlorotoluene	11.3	11.9	10.0	10.0	113	119	80-128	5	18	
4-Chlorotoluene	11.6	12.2	10.0	10.0	116	122	80-130	5	19	
1,3,5-Trimethylbenzene	11.4	11.9	10.0	10.0	114	119	80-131	4	18	
tert-Butylbenzene	11.0	11.7	10.0	10.0	110	117	80-130	6	18	
1,2,4-Trimethylbenzene	11.2	11.7	10.0	10.0	112	117	80-130	4	18	
sec-Butylbenzene	11.5	12.2	10.0	10.0	115	122	80-130	6	18	
1,3-Dichlorobenzene	11.1	11.7	10.0	10.0	111	117	80-126	5	17	
p-Isopropyltoluene	11.7	12.5	10.0	10.0	117	125	80-132	7	18	
1,4-Dichlorobenzene	10.9	11.3	10.0	10.0	109	113	80-121	4	17	
1,2-Dichlorobenzene	10.5	11.3	10.0	10.0	105	113	79-125	7	15	
n-Butylbenzene	12.7	13.4	10.0	10.0	127	134	80-138	5	19	
1,2-Dibromo-3-chloropropane	10.0	10.9	10.0	10.0	100	109	73-133	9	15	
1,2,4-Trichlorobenzene	12.3	12.7	10.0	10.0	123	127	80-139	3	18	
Hexachlorobutadiene	12.0	13.2	10.0	10.0	120	132	80-151	10	18	
Naphthalene	11.0	12.2	10.0	10.0	110	122	68-144	10	25	
1,2,3-Trichlorobenzene	11.9	12.8	10.0	10.0	119	128	75-146	7	28	
Surrogate:										
Dibromofluoromethane					90	92	75-127			
Toluene-d8					95	97	80-127			
4-Bromofluorobenzene					103	106	78-125			



Date of Report: August 17, 2023
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PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		N. Tanks Concrete				
Laboratory ID:		08-161-01				
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	81	39-111				
Pyrene-d10	76	47-114				
Terphenyl-d14	81	44-121				



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 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816S1					
Naphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[j,k]fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	82	44-121				



Date of Report: August 17, 2023
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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0816S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0705	0.0717	0.0833	0.0833	85	86	57-116	2	16	
Acenaphthylene	0.0738	0.0799	0.0833	0.0833	89	96	59-124	8	15	
Acenaphthene	0.0719	0.0759	0.0833	0.0833	86	91	59-124	5	15	
Fluorene	0.0747	0.0775	0.0833	0.0833	90	93	62-122	4	15	
Phenanthrene	0.0731	0.0748	0.0833	0.0833	88	90	62-119	2	15	
Anthracene	0.0761	0.0798	0.0833	0.0833	91	96	64-123	5	15	
Fluoranthene	0.0735	0.0751	0.0833	0.0833	88	90	63-123	2	15	
Pyrene	0.0731	0.0750	0.0833	0.0833	88	90	62-124	3	15	
Benzo[a]anthracene	0.0788	0.0796	0.0833	0.0833	95	96	59-131	1	15	
Chrysene	0.0722	0.0752	0.0833	0.0833	87	90	61-124	4	15	
Benzo[b]fluoranthene	0.0815	0.0850	0.0833	0.0833	98	102	60-126	4	15	
Benzo(j,k)fluoranthene	0.0711	0.0732	0.0833	0.0833	85	88	63-121	3	17	
Benzo[a]pyrene	0.0790	0.0819	0.0833	0.0833	95	98	60-122	4	15	
Indeno(1,2,3-c,d)pyrene	0.0813	0.0875	0.0833	0.0833	98	105	58-127	7	15	
Dibenz[a,h]anthracene	0.0856	0.0887	0.0833	0.0833	103	106	60-124	4	15	
Benzo[g,h,i]perylene	0.0782	0.0812	0.0833	0.0833	94	97	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					77	81	39-111			
Pyrene-d10					78	79	47-114			
Terphenyl-d14					83	82	44-121			



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 Project: Star Forge WO-1

PAHs EPA 8270E/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Naphthalene	ND	0.019	EPA 8270E/SIM	8-16-23	8-17-23	U1
2-Methylnaphthalene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.21	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	0.031	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	0.044	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	0.058	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	0.043	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	0.029	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	0.065	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	0.057	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	0.052	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	60	26-106				
Pyrene-d10	54	45-104				
Terphenyl-d14	74	43-114				



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PAHs EPA 8270E/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		LP-water				
Laboratory ID:		08-161-03				
Naphthalene	6.2	4.8	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	49	24	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	13	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	---	26-106				S
Pyrene-d10	---	45-104				S
Terphenyl-d14	---	43-114				S



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 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
Naphthalene	ND	0.020	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	44	26-106				
Pyrene-d10	63	45-104				
Terphenyl-d14	70	43-114				



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 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.291	0.346	0.500	0.500	58	69	35 - 84	17	34	
Acenaphthylene	0.403	0.462	0.500	0.500	81	92	44 - 97	14	29	
Acenaphthene	0.352	0.401	0.500	0.500	70	80	40 - 93	13	29	
Fluorene	0.375	0.422	0.500	0.500	75	84	46 - 97	12	24	
Phenanthrene	0.373	0.421	0.500	0.500	75	84	49 - 102	12	21	
Anthracene	0.388	0.441	0.500	0.500	78	88	50 - 99	13	21	
Fluoranthene	0.383	0.427	0.500	0.500	77	85	53 - 107	11	21	
Pyrene	0.375	0.422	0.500	0.500	75	84	52 - 111	12	23	
Benzo[a]anthracene	0.421	0.472	0.500	0.500	84	94	51 - 119	11	20	
Chrysene	0.393	0.433	0.500	0.500	79	87	52 - 113	10	21	
Benzo[b]fluoranthene	0.428	0.464	0.500	0.500	86	93	50 - 116	8	24	
Benzo(j,k)fluoranthene	0.390	0.446	0.500	0.500	78	89	54 - 113	13	22	
Benzo[a]pyrene	0.416	0.465	0.500	0.500	83	93	52 - 110	11	21	
Indeno(1,2,3-c,d)pyrene	0.459	0.508	0.500	0.500	92	102	55 - 114	10	21	
Dibenz[a,h]anthracene	0.471	0.530	0.500	0.500	94	106	55 - 111	12	19	
Benzo[g,h,i]perylene	0.431	0.486	0.500	0.500	86	97	52 - 111	12	20	
Surrogate:										
2-Fluorobiphenyl					61	65	26-106			
Pyrene-d10					67	72	45-104			
Terphenyl-d14					72	77	43-114			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Aroclor 1016	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1221	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1232	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1242	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1248	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1254	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1260	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1262	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1268	ND	1.0	EPA 8082A	8-15-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	114	50-127				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S1					
Aroclor 1016	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1221	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1232	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1242	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1248	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1254	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1260	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1262	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1268	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	88	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-157-03									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.353	0.361	0.500	0.500	ND	71	72	41-121	2	28
Surrogate:										
DCB						83	84	50-127		



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Aroclor 1016	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-15-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	112	55-138				
Client ID:	LP-water					
Laboratory ID:	08-161-03					
Aroclor 1016	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1221	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1232	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1242	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1248	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1254	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1260	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1262	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1268	ND	25	EPA 8082A	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	55-138				S, X



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815W1					
Aroclor 1016	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	78	55-138				
Laboratory ID:	MB0816W1 MCU					
Aroclor 1016	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	105	55-138				
						X

X

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS								
Laboratory ID:	SB0815W1							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.337	0.354	0.500	0.500	N/A	67	71	66-120 5 16
Surrogate:								
DCB	70 80 55-138							
Laboratory ID:	SB0816W1							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.444	0.473	0.500	0.500	N/A	89	95	66-120 6 16
Surrogate:								
DCB	102 98 55-138							



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

TOTAL METALS
EPA 6010D/7471B

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Arsenic	ND	10	EPA 6010D	8-15-23	8-15-23	
Barium	70	2.5	EPA 6010D	8-15-23	8-15-23	
Cadmium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Chromium	23	0.50	EPA 6010D	8-15-23	8-15-23	
Copper	75	1.0	EPA 6010D	8-15-23	8-15-23	
Lead	ND	5.0	EPA 6010D	8-15-23	8-15-23	
Mercury	ND	0.25	EPA 7471B	8-15-23	8-15-23	
Nickel	430	2.5	EPA 6010D	8-15-23	8-15-23	
Selenium	ND	10	EPA 6010D	8-15-23	8-15-23	
Silver	5.0	1.0	EPA 6010D	8-15-23	8-16-23	
Zinc	47	2.5	EPA 6010D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515SM2					
Arsenic	ND	10	EPA 6010D	8-15-23	8-15-23	
Barium	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Cadmium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Chromium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Copper	ND	1.0	EPA 6010D	8-15-23	8-15-23	
Lead	ND	5.0	EPA 6010D	8-15-23	8-15-23	
Nickel	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Selenium	ND	10	EPA 6010D	8-15-23	8-15-23	
Zinc	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Laboratory ID:	MB0515S1					
Mercury	ND	0.25	EPA 7471B	8-15-23	8-15-23	
Laboratory ID:	MB0815SM1					
Silver	ND	1.0	EPA 6010D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-155-02							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	43.2	50.1	NA	NA	NA	NA	15	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	13.3	14.2	NA	NA	NA	NA	7	20
Copper	28.3	27.5	NA	NA	NA	NA	3	20
Lead	22.9	22.2	NA	NA	NA	NA	3	20
Nickel	26.3	23.7	NA	NA	NA	NA	10	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Zinc	52.1	62.5	NA	NA	NA	NA	18	20

Laboratory ID:	08-155-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-155-02							
	ORIG	DUP						
Silver	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-155-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	94.8	94.8	100	100	ND	95	95	75-125	0	20
Barium	138	142	100	100	43.2	95	99	75-125	3	20
Cadmium	47.9	48.3	50.0	50.0	ND	96	97	75-125	1	20
Chromium	106	110	100	100	13.3	93	97	75-125	4	20
Copper	71.2	75.1	50.0	50.0	28.3	86	94	75-125	5	20
Lead	256	258	250	250	22.9	93	94	75-125	1	20
Nickel	117	121	100	100	26.3	90	95	75-125	4	20
Selenium	98.0	98.9	100	100	ND	98	99	75-125	1	20
Zinc	146	149	100	100	52.1	94	97	75-125	2	20

Laboratory ID:	08-155-02									
Mercury	0.514	0.517	0.500	0.500	0.0349	96	96	80-120	1	20

Laboratory ID:	08-155-02									
	MS	MSD	MS	MSD		MS	MSD			
Silver	22.4	21.0	25.0	25.0	ND	89	84	75-125	6	20



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

TOTAL METALS
EPA 6010D/7470A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		OWS-15				
Laboratory ID:		08-161-02				
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	

Client ID:		LP-water				
Laboratory ID:		08-161-03				
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816WH2					
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	
Laboratory ID:	MB0817W1					
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-038-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	ND	ND	NA	NA	NA	NA	NA	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	ND	ND	NA	NA	NA	NA	NA	20
Copper	ND	ND	NA	NA	NA	NA	NA	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-158-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-038-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	1940	1870	2000	2000	ND	97	94	75-125	3	20
Barium	2070	2020	2000	2000	ND	103	101	75-125	2	20
Cadmium	977	953	1000	1000	ND	98	95	75-125	2	20
Chromium	2040	1980	2000	2000	ND	102	99	75-125	3	20
Copper	1010	993	1000	1000	ND	101	99	75-125	2	20
Lead	5150	5070	5000	5000	ND	103	101	75-125	1	20
Nickel	2020	1980	2000	2000	ND	101	99	75-125	2	20
Selenium	1960	1900	2000	2000	ND	98	95	75-125	3	20
Silver	470	459	500	500	ND	94	92	75-125	2	20
Zinc	2020	1970	2000	2000	ND	101	99	75-125	3	20

Laboratory ID:	08-158-01									
Mercury	5.98	6.03	6.25	6.25	ND	96	96	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





ONSITE ENVIRONMENTAL
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 www.onsite-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com					
Company: DH Environmental					
Project Number:					
Project Name: Star Forge WD-1					
Project Manager: Due Hill					
Sampled by: N. Moxley / J. Brier					
Date Sampled: ☒ 2 Days ☒ 7 Days ☐ Standard (7 Days)					
(other) _____					
Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☒ 2 Days ☒ 3 Days					
Number of Containers					
Laboratory Number: 08-161					
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)					
NWTPH-Gx					
NWTPH-Dx (SG Clean-up ☐)					
Volatiles 8260					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level)					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals + Cu, Ni, Zn					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
% Moisture					



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 28, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge WO-1
Laboratory Reference No. 2308-161B

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 15, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID: N. Tanks Concrete

Report date: August 28, 2023

Submitted to:

OnSite Environmental

14648 NE 95th Street

Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on one sample submitted by OnSite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The sample, N. Tanks Concrete, was received in the laboratory on August 23, 2023. Upon arrival at the laboratory the sample was inspected and contents verified against information provided on the chain-of-custody form. The sample was stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number	2308-038
Sample ID	N. Tanks Concrete
Test initiation date; time	8/23/2023; 0945h
Test termination date; time	8/27/2023; 0945h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The sample was tested using fish received on July 12, 2023.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	62 days post swim-up (hatch date 5/31/2023)
Mean weight	0.41 g
Mean length	41 mm
Ratio of longest to shortest	1.2
Loading	0.68 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on N. Tanks Concrete is contained in Table 3. There was no mortality during the test. Based on these results, the sample does not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
N. Tanks	10	30	0	None
Concrete	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated August 16, 2023. The LC₅₀ of 166 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 31.3 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2020. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised September 2020.

Appendix A
Oncorhynchus mykiss Dangerous Waste Toxicity Test
Raw Bench Sheets

Dangerous Waste Toxicity Test

Client: OnSite Environmental Inc.

Sample ID: N. Tanks Concrete

Test #: 2308-038

Log In #: T23-264

Start Date & Time: 8/23/2023 0945

End Date & Time: 8/27/2023 0945

Test Organism: Oncorhynchus mykiss

Test Protocol: Washington State Department of Ecology Publ. 80-12

[illegible]

Test Volume:

Trouf lodge
7/12/2023

Date of Hatch:	5/31	2023
Date of Swim up:	6/21	2023

Sample	Alk. (int.)	Hard. (int.)	Alk. (fin.)	Hard. (fin.)	Chlorine
	(mg/L as CaCO ₃)				(mg/L Cl ₂)
Control	69	100	69	100	4003
100PPM	69	100	69	100	
					Length max

Weights (g):	Lengths (mm):	Length max/min:	Loading:
341	388	448	336
341	391	441	337
341	394	444	339
341	397	447	341
341	400	450	341
341	403	453	341
341	406	456	341
341	409	459	341
341	412	462	341
341	415	465	341
341	418	468	341
341	421	471	341
341	424	474	341
341	427	477	341
341	430	480	341
341	433	483	341
341	436	486	341
341	439	489	341
341	442	492	341
341	445	495	341
341	448	498	341
341	451	501	341
341	454	504	341
341	457	507	341
341	460	510	341
341	463	513	341
341	466	516	341
341	469	519	341
341	472	522	341
341	475	525	341
341	478	528	341
341	481	531	341
341	484	534	341
341	487	537	341
341	490	540	341
341	493	543	341
341	496	546	341
341	499	549	341
341	502	552	341
341	505	555	341
341	508	558	341
341	511	561	341
341	514	564	341
341	517	567	341
341	520	570	341
341	523	573	341
341	526	576	341
341	529	579	341
341	532	582	341
341	535	585	341
341	538	588	341
341	541	591	341
341	544	594	341
341	547	597	341
341	550	600	341
341	553	603	341
341	556	606	341
341	559	609	341
341	562	612	341
341	565	615	341
341	568	618	341
341	571	621	341
341	574	624	341
341	577	627	341
341	580	630	341
341	583	633	341
341	586	636	341
341	589	639	341
341	592	642	341
341	595	645	341
341	598	648	341
341	601	651	341
341	604	654	341
341	607	657	341
341	610	660	341
341	613	663	341
341	616	666	341
341	619	669	341
341	622	672	341
341	625	675	341
341	628	678	341
341	631	681	341
341	634	684	341
341	637	687	341
341	640	690	341
341	643	693	341
341	646	696	341
341	649	699	341
341	652	702	341
341	655	705	341
341	658	708	341
341	661	711	341
341	664	714	341
341	667	717	341

Loading: 0.69 g/l

$\mu =$ 41 Rainier Environmental
 $\mu =$ 41 Washington Laboratory

5013 Pacific HWY E Suite 20

Dilution Water Source: MHW 075

QA Check 87

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

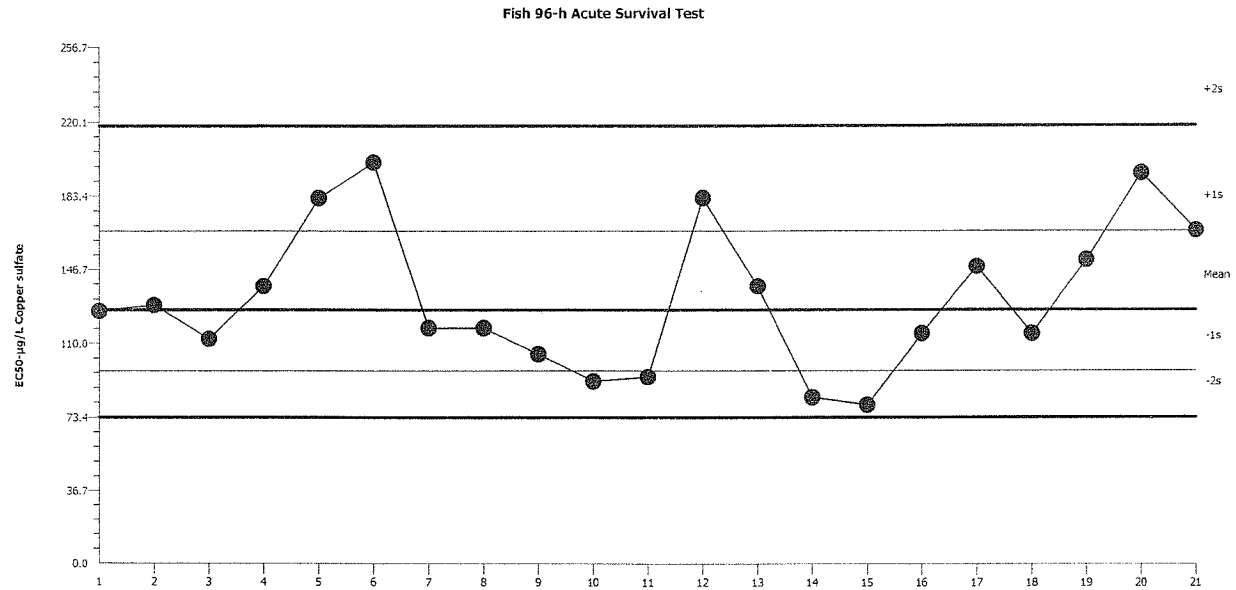
Organism: Oncorhynchus mykiss (Rainbow Tro

Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF



Mean: 126.5

Count: 20

-1s Warning Limit: 96.31

-2s Action Limit: 73.35

Sigma: NA

CV: 31.30%

+1s Warning Limit: 166.1

+2s Action Limit: 218.1

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Dec	6	126	-0.4773	-0.01388			13-8732-0751	08-1557-4326
2	2022	Jan	5	128.9	2.468	0.07094			08-2261-8669	03-7761-6146
3		Feb	5	112.2	-14.22	-0.438			01-7899-0440	09-8784-8920
4		Mar	7	138.2	11.72	0.3254			15-8880-5349	18-5703-0746
5		Apr	11	182.3	55.88	1.343	(+)		19-4475-1025	00-2732-4149
6		May	11	200	73.53	1.683	(+)		04-3686-1214	17-7144-4708
7		Jun	13	117.6	-8.915	-0.2683			02-1194-6933	14-6655-2671
8		Jul	11	117.6	-8.915	-0.2683			18-9490-6426	20-8229-8763
9		Aug	12	104.7	-21.74	-0.6924			16-1269-6384	20-8498-8487
10		Sep	14	91.17	-35.3	-1.201	(-)		21-3997-4244	00-3631-7496
11		Oct	10	93.3	-33.17	-1.117	(-)		01-3925-6404	03-9134-1193
12		Nov	14	182.3	55.88	1.343	(+)		09-0829-7750	07-1545-0995
13		Dec	12	138.2	11.72	0.3254			02-0643-2090	02-3247-9401
14	2023	Jan	12	83.12	-43.35	-1.541	(-)		10-5717-9012	06-2162-7195
15		Feb	13	79.37	-47.1	-1.71	(-)		19-2977-9552	20-0081-1333
16		Mar	13	114.9	-11.6	-0.3532			14-1992-9075	20-3196-8530
17		Apr	14	148.1	21.64	0.5799			00-0643-4903	11-5830-8594
18		May	15	114.9	-11.6	-0.3532			06-5181-9947	15-0207-5859
19		Jun	13	151.6	25.1	0.6647			16-7900-9504	12-9379-3365
20		Jul	14	194.7	68.27	1.585	(+)		19-5463-0764	04-3793-4724
21		Aug	16	166.2	39.78	1.004	(+)		09-9289-7634	17-7520-8601

CETIS Summary Report

Report Date: 21 Aug-23 10:41 (p 1 of 1)
Test Code: RA081623OM | 09-9289-7634

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	10-3512-0978	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	16 Aug-23 13:30	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	20 Aug-23 13:30	Species:	Oncorhynchus mykiss	Brine:	
Duration:	96h	Source:	Trout Lodge Fish Farm	Age:	55d
Sample ID:	09-7638-9830	Code:	RA081623OM	Client:	Internal Lab
Sample Date:	16 Aug-23	Material:	Copper sulfate	Project:	
Receive Date:	16 Aug-23	Source:	Reference Toxicant		
Sample Age:	14h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-5429-9781	96h Survival Rate	50	100	70.71	16.9%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-7520-8601	96h Survival Rate	LC50	166.2	141.5	195.3		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.8	0.7627	0.8373	0.7	0.9	0.05774	0.1	12.5%	20.0%
200		3	0.4333	0.3394	0.5273	0.2	0.7	0.1453	0.2517	58.08%	56.67%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.9	0.7	0.8
200		0.4	0.7	0.2
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		9/10	7/10	8/10
200		4/10	7/10	2/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



Turnaround Request

1 Day 2 Day 3 Day

Standard

Other: 1 Week

Laboratory Reference #: 08-179

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number:

Project Name:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analyses
	SPU-TANKSOLIDS	8/16/23	11:30	S	1	Fish Bioassay (Dangerous Waste 80-12 Test)
	Signature _____	Company _____	Date _____	Time _____	Comments/Special Instructions T 23-272	
Relinquished by:	[Signature]	CORC	8/22/23	1600		
Received by:		US	US			
Relinquished by:		US				
Received by:	Eric Talley	RANDR	8/23/23	1300		
Relinquished by:						
Received by:						



Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com			Turnaround Request (in working days)		Laboratory Number: 08-161															
Company: DH Environmental			(Check One)																	
Project Number:			☐ Same Day ☐ 1 Day																	
Project Name: Star Forge WO-1			☒ 2 Days ☒ 3 Days																	
Project Manager: Dave Hill			☐ Standard (7 Days)																	
Sampled by: N. Moxley / J. Griene			☐ (other)																	
Lab ID			Date Sampled		Time Sampled		Matrix		Number of Containers											
1	N. Tanks Concrete	8/14/23	1215	Solid	2															
2	OWS-15	8/14/23	1300	Water	9															
3	LP-Water	8/15/23	1030	Water	9															
					NWTPH-HCID															
					NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)															
					NWTPH-Gx															
					NWTPH-Dx (SG Clean-up ☐)															
					Volatiles 8260															
					Halogenated Volatiles 8260															
					EDB EPA 8011 (Waters Only)															
					Semivolatiles 8270/SIM (with low-level PAHs)															
					PAHs 8270/SIM (low-level)															
					PCBs 8082															
					Organochlorine Pesticides 8081															
					Organophosphorus Pesticides 8270/SIM															
					Chlorinated Acid Herbicides 8151															
					Total RCRA Metals + Cu, Ni, Zn															
					Total MTCA Metals															
					TCLP Metals															
					HEM (oil and grease) 1664															
					Fish Bioassay															
					% Moisture															
Signature			Company		Date		Time		Comments/Special Instructions											
Relinquished			DH Environmental		8-15-23		1:15		LP-Water contains LWAPL											
Received			OSC		8/18/23		1315		data to data@dhenv.com											
Relinquished									Hold for possible follow-up of TELP also											
Received									fish bioassay											
Relinquished									X Added 8/18/23 DB (RUSM) 1 we											
Received									Data Package: Standard ☒ Level III ☐ Level IV ☐											
Reviewed/Date			Reviewed/Date						Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐											



DA

DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site, UST Piping Soil

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: UST Piping Soil

Generation Process: Utility piping excavation

RCRA ID Number that waste will be managed under:

NA

Total Quantity and/or Estimated Generation rate:

~ 40 cubic yards

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer	pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]
	Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals																																				
			☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L																																				
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: TCLP lead was non-detect for sample greater than “20x rule”	<table><tr><td>Arsenic:</td><td>31</td><td>☐ ND</td></tr><tr><td>Barium:</td><td>82</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td>0.85</td><td>☐ ND</td></tr><tr><td>Chromium:</td><td>55</td><td>☐ ND</td></tr><tr><td>Copper:</td><td>180</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>110</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td>1,100</td><td>☐ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Zinc:</td><td>280</td><td>☐ ND</td></tr><tr><td colspan="3">Comments: Values represent the highest concentrations among all samples</td></tr></table>	Arsenic:	31	☐ ND	Barium:	82	☐ ND	Cadmium:	0.85	☐ ND	Chromium:	55	☐ ND	Copper:	180	☐ ND	Lead:	110	☐ ND	Mercury:		☒ ND	Nickel:	1,100	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Zinc:	280	☐ ND	Comments: Values represent the highest concentrations among all samples		
Arsenic:	31	☐ ND																																					
Barium:	82	☐ ND																																					
Cadmium:	0.85	☐ ND																																					
Chromium:	55	☐ ND																																					
Copper:	180	☐ ND																																					
Lead:	110	☐ ND																																					
Mercury:		☒ ND																																					
Nickel:	1,100	☐ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Zinc:	280	☐ ND																																					
Comments: Values represent the highest concentrations among all samples																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Concrete/Asphalt/debris	25 - 50
Soil	50 - 75



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0 % [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, for each soil sample representative of the waste stream. Two samples had a calculated equivalent concentration (EC) value greater than 0.001%, resulting in an initial criteria waste designation of WT02. A follow-up fish bioassay was performed in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*, for the sample with the highest EC value. The fish bioassay test resulted in zero mortality, which refutes the initial WT02 designation. **This waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2308-254, 2308-254B, and 2310-177)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solid

Designation Performed by: Nathan Moxley, LHG
Title: Senior Geologist

Date: 10-17-2023

Designation Reviewed by: Dave Hill, PE, CHMM
Title: Principal Engineer

Date: 10-17-2023

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Concentration*

Toxicity^{Source}

Toxic Category

Concentration (mass %)

Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	35	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	18	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				1.80E-03	
Copper	7440-50-8	58	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		5.80E-03			
Lead	7439-92-1	24	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.40E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	150	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.50E-02
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	82	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			8.20E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ³	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	0.66	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C				6.60E-05	
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					

Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	0.13	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				1.30E-05	
Fluorene	86-73-7	0.25	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			2.50E-05		
Phenanthrene	85-01-8	2.6	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.60E-04			
Anthracene	120-12-7	0.58	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	5.80E-05				
Fluoranthene	206-44-0	4.4	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				4.40E-04	
Pyrene	129-00-0	3.5	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				3.50E-04	
Benzo(a)anthracene	56-55-3	2.6	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.60E-04	
Chrysene	218-01-9	2.8	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				2.80E-04	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	3.42	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.42E-04	
Benzo(a)pyrene	50-32-8	1.8	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.80E-04	
Indeno(1,2,3-cd)pyrene	193-39-5	0.99	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.90E-05	
Dibenz(a,h)anthracene	53-70-3	0.32	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.20E-05	
Benzo(g,h,i)perylene	198-55-0	0.93	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.30E-05	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ⁴	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000580	0.0060600	0.0082250	0.0063550	0.0150

Enter Category Mass % Here →	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	5.80E-05	6.06E-03	8.23E-03	6.36E-03	1.50E-02	0.0007541	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Concentration*

Toxicity^{Source}

Toxic Category

Concentration (mass %)

Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	16	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.60E-03		
Barium	7440-39-3	60	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	46	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				4.60E-03	
Copper	7440-50-8	180	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		1.80E-02			
Lead	7439-92-1	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	1100	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.10E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	120	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.20E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ³	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	0.11	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.10E-05		
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				

Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	0.041	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		4.10E-06			
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	0.066	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				6.60E-06	
Pyrene	129-00-0	0.062	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				6.20E-06	
Benzo(a)anthracene	56-55-3	0.033	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.30E-06	
Chrysene	218-01-9	0.045	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				4.50E-06	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.049	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.90E-06	
Benzo(a)pyrene	50-32-8	0.036	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.60E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.029	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.90E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.041	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.10E-06	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ⁴	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000000	0.0180041	0.0136110	0.0156361	0.1100

Enter Category Mass % Here →	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.80E-02	1.36E-02	1.56E-02	1.10E-01		
	0.00E+00	1.80E-03	1.36E-04	1.56E-05	1.10E-05	0.0019632	WT02

Sources 1 RTECS: Registry of Toxic Effects of Chemical Substances
 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 3 ECOTOX Database: United States Environmental Protection Agency

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Units Displayed as		mg/kg	Conversion factor	1 mg/kg = 10 ⁻⁴ %	Concentration (mass %)				
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	18	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.80E-03		
Barium	7440-39-3	54	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	54	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.40E-03	
Copper	7440-50-8	170	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		1.70E-02			
Lead	7439-92-1	46	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.60E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	810	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					8.10E-02
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	150	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.50E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ³	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ¹	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	0.056	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			5.60E-06	
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	0.12	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C				1.20E-05
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				

Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	0.84	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		8.40E-05			
Anthracene	120-12-7	0.21	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	2.10E-05				
Fluoranthene	206-44-0	1.5	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				1.50E-04	
Pyrene	129-00-0	1.2	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				1.20E-04	
Benzo(a)anthracene	56-55-3	0.87	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				8.70E-05	
Chrysene	218-01-9	0.92	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				9.20E-05	
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	1.16	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.16E-04	
Benzo(a)pyrene	50-32-8	0.61	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				6.10E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.33	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.30E-05	
Dibenz(a,h)anthracene	53-70-3	0.11	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.10E-05	
Benzo(g,h,i)perylene	198-55-0	0.31	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.10E-05	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000210	0.0170840	0.0168056	0.0107130	0.0810

Enter Category Mass % Here →	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.10E-05	1.71E-02	1.68E-02	1.07E-02	8.10E-02	0.0019163	WT02
	2.10E-05	1.71E-03	1.68E-04	1.07E-05	8.10E-06		

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Concentration*

Toxicity^{Source}

Toxic Category

Concentration (mass %)

Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	31	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			3.10E-03		
Barium	7440-39-3	82	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	0.85	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	8.50E-05				
Chromium	7440-47-3	25	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.50E-03	
Copper	7440-50-8	67	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		6.70E-03			
Lead	7439-92-1	49	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.90E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	94	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					9.40E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	280	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.80E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	0.4	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				4.00E-05	
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	0.46	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				4.60E-05	
m,p-Xylene	108-38-3, 106-42-3	2.1	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				2.10E-04	
o-Xylene	95-47-6	0.87	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				8.70E-05	
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ³	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	2.1	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C				2.10E-04	
2-methylnaphthalene	91-57-6	6.6	1630 mg/kg Oral Rat LD50 ²	D					6.60E-04
1-methylnaphthalene	90-12-0	4.6	1840 mg/kg Oral Rate LD50 ²	D					4.60E-04

Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	0.071	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				7.10E-06	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.045	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.50E-06	
Benzo(a)pyrene	50-32-8	0.034	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.40E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ⁴	D					
Diesel Range	68334-30-5	3400	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	860	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000850	0.0067000	0.0311000	0.0080080	0.0105

Enter Category Mass % Here →	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	8.50E-05	6.70E-03	3.11E-02	8.01E-03	1.05E-02	0.0010751	WT02
	8.50E-05	6.70E-04	3.11E-04	8.01E-06	1.05E-06		

Sources

- 1 RTECS: Registry of Toxic Effects of Chemical Substances
- 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
- 3 ECOTOX Database: United States Environmental Protection Agency

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Concentration*

Toxicity^{Source}

Toxic Category

Concentration (mass %)

Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	41	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	55	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.50E-03	
Copper	7440-50-8	56	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		5.60E-03			
Lead	7439-92-1	18	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.80E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	64	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					6.40E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	44	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			4.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/L/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	0.0012	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				1.20E-07	
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/L/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ³	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					

Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	0.11	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.10E-05	
Chrysene	218-01-9	0.13	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				1.30E-05	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.236	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.36E-05	
Benzo(a)pyrene	50-32-8	0.13	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.30E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.16	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.60E-05	
Dibenz(a,h)anthracene	53-70-3	0.031	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.10E-06	
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ⁴	D					
Diesel Range	68334-30-5	120	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	260	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000000	0.0056000	0.0044000	0.0073798	0.0064

Enter Category Mass % Here	$\sum X\% / 1$					EC	Designation
	0.00E+00	5.60E-03	4.40E-03	7.38E-03	6.40E-03		
	0.00E+00	5.60E-04	4.40E-05	7.38E-06	6.40E-07	0.0006120	Non-Dangerous Waste

Sources

- 1 RTECS: Registry of Toxic Effects of Chemical Substances
- 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
- 3 ECOTOX Database: United States Environmental Protection Agency

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Conversion Factor
 0.0001

Units Displayed as

mg/kg

Concentration*

Toxicity^{Source}

Toxic Category

Concentration (mass %)

Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	33	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	20	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.00E-03	
Copper	7440-50-8	30	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		3.00E-03			
Lead	7439-92-1	18	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.80E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	58	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					5.80E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	43	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			4.30E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					

Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ³	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				

Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	0.57	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				5.70E-05	
Chrysene	218-01-9	0.59	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				5.90E-05	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.91	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.10E-05	
Benzo(a)pyrene	50-32-8	0.63	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				6.30E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.37	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.70E-05	
Dibenz(a,h)anthracene	53-70-3	0.088	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				8.80E-06	
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ⁴	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	190	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
Total (SUM)					0.0000000	0.0030000	0.0043000	0.0041158	0.0058

Enter Category Mass % Here →	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.00E-03	4.30E-03	4.12E-03	5.80E-03		
	0.00E+00	3.00E-04	4.30E-05	4.12E-06	5.80E-07	0.0003477	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 28, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Waste Designation
Laboratory Reference No. 2308-254

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 28, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254
Project: Star Forge Waste Designation

Case Narrative

Samples were collected on August 23, 2023 and received by the laboratory on August 23, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Dichlorodifluoromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0066	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
(trans) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	101	71-130				



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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0086	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0065	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0017	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Surrogate: Percent Recovery Control Limits						
Dibromofluoromethane	96	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	99	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0083	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0063	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0017	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.010	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0076	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	



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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



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 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0370	0.0500	0.0500	75	74	30-160	1	26	
Chloromethane	0.0410	0.0429	0.0500	0.0500	82	86	59-131	5	26	
Vinyl Chloride	0.0440	0.0473	0.0500	0.0500	88	95	68-136	7	23	
Bromomethane	0.0420	0.0476	0.0500	0.0500	84	95	48-155	13	32	
Chloroethane	0.0458	0.0506	0.0500	0.0500	92	101	67-141	10	16	
Trichlorofluoromethane	0.0513	0.0575	0.0500	0.0500	103	115	76-127	11	19	
1,1-Dichloroethene	0.0489	0.0544	0.0500	0.0500	98	109	75-129	11	19	
Acetone	0.0572	0.0568	0.0500	0.0500	114	114	49-158	1	37	
Iodomethane	0.0328	0.0389	0.0500	0.0500	66	78	37-140	17	27	
Carbon Disulfide	0.0415	0.0452	0.0500	0.0500	83	90	41-143	9	19	
Methylene Chloride	0.0467	0.0525	0.0500	0.0500	93	105	60-124	12	18	
(trans) 1,2-Dichloroethene	0.0489	0.0538	0.0500	0.0500	98	108	79-133	10	15	
Methyl t-Butyl Ether	0.0498	0.0526	0.0500	0.0500	100	105	73-125	5	17	
1,1-Dichloroethane	0.0491	0.0541	0.0500	0.0500	98	108	79-125	10	17	
Vinyl Acetate	0.0538	0.0552	0.0500	0.0500	108	110	51-145	3	41	
2,2-Dichloropropane	0.0532	0.0532	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0523	0.0574	0.0500	0.0500	105	115	75-131	9	15	
2-Butanone	0.0567	0.0572	0.0500	0.0500	113	114	54-145	1	32	
Bromochloromethane	0.0496	0.0552	0.0500	0.0500	99	110	80-126	11	15	
Chloroform	0.0488	0.0525	0.0500	0.0500	98	105	80-123	7	15	
1,1,1-Trichloroethane	0.0466	0.0523	0.0500	0.0500	93	105	78-124	12	21	
Carbon Tetrachloride	0.0419	0.0473	0.0500	0.0500	84	95	74-127	12	18	
1,1-Dichloropropene	0.0445	0.0516	0.0500	0.0500	89	103	80-123	15	15	
Benzene	0.0476	0.0520	0.0500	0.0500	95	104	80-122	9	18	
1,2-Dichloroethane	0.0494	0.0542	0.0500	0.0500	99	108	75-124	9	15	
Trichloroethene	0.0514	0.0521	0.0500	0.0500	103	104	80-129	1	18	
1,2-Dichloropropane	0.0539	0.0540	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0499	0.0483	0.0500	0.0500	100	97	80-123	3	15	
Bromodichloromethane	0.0532	0.0533	0.0500	0.0500	106	107	80-129	0	15	
(cis) 1,3-Dichloropropene	0.0540	0.0541	0.0500	0.0500	108	108	80-130	0	15	
Methyl Isobutyl Ketone	0.0554	0.0518	0.0500	0.0500	111	104	63-137	7	27	
Toluene	0.0505	0.0497	0.0500	0.0500	101	99	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0546	0.0554	0.0500	0.0500	109	111	80-124	1	15	



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0480	0.0480	0.0500	0.0500	96	96	80-120	0	15	
Tetrachloroethene	0.0540	0.0547	0.0500	0.0500	108	109	77-126	1	15	
1,3-Dichloropropane	0.0529	0.0528	0.0500	0.0500	106	106	77-123	0	15	
2-Hexanone	0.0557	0.0517	0.0500	0.0500	111	103	53-137	7	29	
Dibromochloromethane	0.0548	0.0528	0.0500	0.0500	110	106	80-128	4	16	
1,2-Dibromoethane	0.0528	0.0514	0.0500	0.0500	106	103	80-122	3	20	
Chlorobenzene	0.0495	0.0509	0.0500	0.0500	99	102	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0504	0.0498	0.0500	0.0500	101	100	80-120	1	15	
Ethylbenzene	0.0510	0.0522	0.0500	0.0500	102	104	80-120	2	15	
m,p-Xylene	0.0990	0.102	0.100	0.100	99	102	80-120	3	15	
o-Xylene	0.0511	0.0525	0.0500	0.0500	102	105	80-120	3	15	
Styrene	0.0509	0.0531	0.0500	0.0500	102	106	80-122	4	15	
Bromoform	0.0538	0.0538	0.0500	0.0500	108	108	78-126	0	15	
Isopropylbenzene	0.0520	0.0540	0.0500	0.0500	104	108	80-125	4	15	
Bromobenzene	0.0494	0.0476	0.0500	0.0500	99	95	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0521	0.0493	0.0500	0.0500	104	99	75-122	6	17	
1,2,3-Trichloropropane	0.0502	0.0473	0.0500	0.0500	100	95	72-125	6	20	
n-Propylbenzene	0.0493	0.0492	0.0500	0.0500	99	98	77-126	0	16	
2-Chlorotoluene	0.0523	0.0508	0.0500	0.0500	105	102	75-128	3	15	
4-Chlorotoluene	0.0515	0.0507	0.0500	0.0500	103	101	78-127	2	16	
1,3,5-Trimethylbenzene	0.0502	0.0500	0.0500	0.0500	100	100	77-128	0	15	
tert-Butylbenzene	0.0502	0.0491	0.0500	0.0500	100	98	73-130	2	20	
1,2,4-Trimethylbenzene	0.0514	0.0499	0.0500	0.0500	103	100	77-125	3	16	
sec-Butylbenzene	0.0488	0.0472	0.0500	0.0500	98	94	75-130	3	17	
1,3-Dichlorobenzene	0.0519	0.0514	0.0500	0.0500	104	103	78-123	1	17	
p-Isopropyltoluene	0.0511	0.0513	0.0500	0.0500	102	103	75-130	0	18	
1,4-Dichlorobenzene	0.0520	0.0510	0.0500	0.0500	104	102	77-121	2	17	
1,2-Dichlorobenzene	0.0518	0.0511	0.0500	0.0500	104	102	80-120	1	15	
n-Butylbenzene	0.0532	0.0534	0.0500	0.0500	106	107	76-131	0	20	
1,2-Dibromo-3-chloropropane	0.0597	0.0523	0.0500	0.0500	119	105	61-137	13	28	
1,2,4-Trichlorobenzene	0.0582	0.0604	0.0500	0.0500	116	121	77-127	4	17	
Hexachlorobutadiene	0.0514	0.0512	0.0500	0.0500	103	102	77-125	0	22	
Naphthalene	0.0552	0.0519	0.0500	0.0500	110	104	68-129	6	19	
1,2,3-Trichlorobenzene	0.0527	0.0548	0.0500	0.0500	105	110	77-124	4	19	
Surrogate:										
Dibromofluoromethane					92	102	75-130			
Toluene-d8					100	99	78-128			
4-Bromofluorobenzene					107	107	71-130			



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 Project: Star Forge Waste Designation

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Naphthalene	0.66	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
2-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
1-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthylene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthene	0.13	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluorene	0.25	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Phenanthrene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Anthracene	0.58	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluoranthene	4.4	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Pyrene	3.5	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	2.8	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo(j,k)fluoranthene	0.82	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	1.8	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Indeno(1,2,3-c,d)pyrene	0.99	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Dibenz[a,h]anthracene	0.32	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[g,h,i]perylene	0.93	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>79</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>99</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>96</i>	<i>44-121</i>				



Date of Report: August 28, 2023
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 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Naphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
2-Methylnaphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
1-Methylnaphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Acenaphthylene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Acenaphthene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Fluorene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Phenanthrene	0.041	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Anthracene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Fluoranthene	0.066	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Pyrene	0.062	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[a]anthracene	0.033	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Chrysene	0.045	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[b]fluoranthene	0.049	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[j,k]fluoranthene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[a]pyrene	0.036	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Indeno(1,2,3-c,d)pyrene	0.029	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Dibenz[a,h]anthracene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[g,h,i]perylene	0.041	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	82	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Naphthalene	0.12	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
2-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
1-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthylene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluorene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Phenanthrene	0.84	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Anthracene	0.21	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluoranthene	1.5	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Pyrene	1.2	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	0.87	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.92	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	0.92	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[j,k]fluoranthene	0.24	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	0.61	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Indeno(1,2,3-c,d)pyrene	0.33	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Dibenz[a,h]anthracene	0.11	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[g,h,i]perylene	0.31	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	39-111				
Pyrene-d10	96	47-114				
Terphenyl-d14	92	44-121				



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 Project: Star Forge Waste Designation

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Fluorene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	86	39-111				
Pyrene-d10	85	47-114				
Terphenyl-d14	91	44-121				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0794	0.0701	0.0833	0.0833	95	84	57-116	12	16	
Acenaphthylene	0.0798	0.0766	0.0833	0.0833	96	92	59-124	4	15	
Acenaphthene	0.0748	0.0706	0.0833	0.0833	90	85	59-124	6	15	
Fluorene	0.0770	0.0713	0.0833	0.0833	92	86	62-122	8	15	
Phenanthrene	0.0747	0.0702	0.0833	0.0833	90	84	62-119	6	15	
Anthracene	0.0761	0.0739	0.0833	0.0833	91	89	64-123	3	15	
Fluoranthene	0.0743	0.0735	0.0833	0.0833	89	88	63-123	1	15	
Pyrene	0.0715	0.0708	0.0833	0.0833	86	85	62-124	1	15	
Benzo[a]anthracene	0.0756	0.0765	0.0833	0.0833	91	92	59-131	1	15	
Chrysene	0.0716	0.0689	0.0833	0.0833	86	83	61-124	4	15	
Benzo[b]fluoranthene	0.0776	0.0767	0.0833	0.0833	93	92	60-126	1	15	
Benzo(j,k)fluoranthene	0.0726	0.0697	0.0833	0.0833	87	84	63-121	4	17	
Benzo[a]pyrene	0.0781	0.0760	0.0833	0.0833	94	91	60-122	3	15	
Indeno(1,2,3-c,d)pyrene	0.0897	0.0883	0.0833	0.0833	108	106	58-127	2	15	
Dibenz[a,h]anthracene	0.0894	0.0865	0.0833	0.0833	107	104	60-124	3	15	
Benzo[g,h,i]perylene	0.0821	0.0789	0.0833	0.0833	99	95	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					88	96	39-111			
Pyrene-d10					81	85	47-114			
Terphenyl-d14					89	92	44-121			



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	69	50-127				
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	0.11	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	78	50-127				
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	0.056	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	79	50-127				



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 Project: Star Forge Waste Designation

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0825S1					
Aroclor 1016	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	100	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-254-01									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.350	0.325	0.500	0.500	ND	70	65	41-121	7	28
Surrogate:										
DCB						75	74	50-127		



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Arsenic	ND	11	EPA 6010D	8-24-23	8-24-23	
Barium	35	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	18	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	58	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	24	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	150	2.7	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	82	2.7	EPA 6010D	8-24-23	8-24-23	

Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Arsenic	16	11	EPA 6010D	8-24-23	8-24-23	
Barium	60	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	46	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	180	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	110	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	1100	27	EPA 6010D	8-24-23	8-28-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	120	2.7	EPA 6010D	8-24-23	8-24-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Arsenic	18	11	EPA 6010D	8-24-23	8-24-23	
Barium	54	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	54	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	170	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	46	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	810	27	EPA 6010D	8-24-23	8-28-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	150	2.7	EPA 6010D	8-24-23	8-24-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824SM3					
Arsenic	ND	10	EPA 6010D	8-24-23	8-24-23	
Barium	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Chromium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Copper	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.0	EPA 6010D	8-24-23	8-24-23	
Nickel	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	10	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Zinc	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Laboratory ID:	MB0823S1					
Mercury	ND	0.25	EPA 7471B	8-23-23	8-23-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-266-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	44.2	42.8	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	20.3	17.5	NA	NA	NA	NA	15	20
Copper	20.6	19.0	NA	NA	NA	NA	8	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	25.4	24.0	NA	NA	NA	NA	6	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	28.7	27.5	NA	NA	NA	NA	4	20

Laboratory ID:	08-218-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-266-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	99.9	99.3	100	100	ND	100	99	75-125	1	20
Barium	147	148	100	100	44.2	103	104	75-125	1	20
Cadmium	47.2	46.9	50.0	50.0	ND	94	94	75-125	1	20
Chromium	119	120	100	100	20.3	98	99	75-125	1	20
Copper	69.5	69.5	50.0	50.0	20.6	98	98	75-125	0	20
Lead	249	248	250	250	ND	100	99	75-125	0	20
Nickel	120	121	100	100	25.4	95	95	75-125	0	20
Selenium	95.9	96.3	100	100	ND	96	96	75-125	0	20
Silver	23.5	22.9	25.0	25.0	ND	94	91	75-125	3	20
Zinc	129	130	100	100	28.7	100	101	75-125	1	20

Laboratory ID:	08-218-01									
Mercury	0.507	0.509	0.500	0.500	0.0124	99	99	80-120	0	20



Date of Report: August 28, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254
Project: Star Forge Waste Designation

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-Soil-1	08-254-01	7	8-23-23
NT-piping-Soil-2	08-254-02	8	8-23-23
NT-piping-Soil-3	08-254-03	7	8-23-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Page 1 of 1

Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. **08-254**

Company:

DE Environmental

Project No.:

Project Name:

Star Forge Waste Disposition

Project Manager:

D. Hill

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☒ 3 Day

☐ Standard

(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

(other)

Requested Analysis

Lab ID

Sample Identification

Date
Sampled

Time
Sampled

Matrix

of
Cont.

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8) *+ Cu, Ni, Zn*

Priority Pollutant Metals (13)

TCLP Metals

VPH

EPH

% Moisture

1 NT-piping-soil-1

8/23/23

0815

Soil

4

2 NT-piping-soil-2

↓

0825

↓

↓

3 NT-piping-soil-3

↓

0835

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1110

RELINQUISHED BY

DATE

RECEIVED BY

DATE

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TIME

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TIME

REVIEWED BY

DATE REVIEWED

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Waste Designation
Laboratory Reference No. 2308-254B

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254B
Project: Star Forge Waste Designation

Case Narrative

Samples were collected on August 23, 2023 and received by the laboratory on August 23, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 5, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254B
Project: Star Forge Waste Designation

TCLP LEAD
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-piping-Soil-2					
Laboratory ID:	08-254-02					
Lead	ND	0.20	EPA 6010D	8-30-23	8-30-23	



Date of Report: September 5, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254B
 Project: Star Forge Waste Designation

**TCLP LEAD
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0830TM1					
Lead	ND	0.20	EPA 6010D	8-30-23	8-30-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-071-13							
	ORIG	DUP						
Lead	6.46	6.43	NA	NA	NA	NA	1	20

MATRIX SPIKES

Laboratory ID:	08-071-13									
	MS	MSD	MS	MSD		MS	MSD			
Lead	16.1	15.9	10.0	10.0	6.46	96	94	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
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- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Dangerous Waste Characterization

Sample ID: NT-Piping-Soil-2

Report date: September 4, 2023

Submitted to:

OnSite Environmental

14648 NE 95th Street

Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on one sample submitted by OnSite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The sample, NT-Piping-Soil-2, was received in the laboratory on August 30, 2023. Upon arrival at the laboratory the sample was inspected and contents verified against information provided on the chain-of-custody form. The sample was stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number	2308-063
Sample ID	NT-Piping-Soil-2
Test initiation date; time	8/31/2023; 1200h
Test termination date; time	9/4/2023; 1200h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The sample was tested using fish received on July 12, 2023.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	70 days post swim-up (hatch date 5/31/2023)
Mean weight	0.42 g
Mean length	42 mm
Ratio of longest to shortest	1.2
Loading	0.70 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on NT-Piping-Soil-2 is contained in Table 3. There was no mortality during the test. Based on these results, the sample does not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
NT-Piping-Soil-2	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated August 16, 2023. The LC₅₀ of 166 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 31.3 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2020. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised September 2020.

Appendix A
Oncorhynchus mykiss Dangerous Waste Toxicity Test
Raw Bench Sheets

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

Organism: Oncorhynchus mykiss (Rainbow Tro

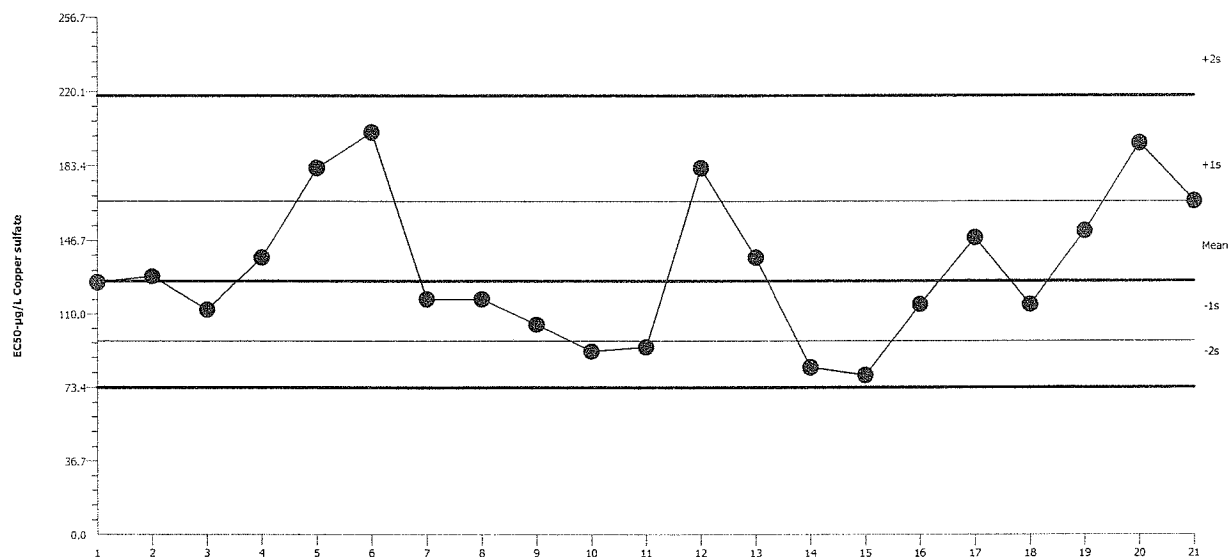
Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF

Fish 96-h Acute Survival Test



Mean: 126.5

Count: 20

-1s Warning Limit: 96.31

-2s Action Limit: 73.35

Sigma: NA

CV: 31.30%

+1s Warning Limit: 166.1

+2s Action Limit: 218.1

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Dec	6	126	-0.4773	-0.01388			13-8732-0751	08-1557-4326
2	2022	Jan	5	128.9	2.468	0.07094			08-2261-8669	03-7761-6146
3		Feb	5	112.2	-14.22	-0.438			01-7899-0440	09-8784-8920
4		Mar	7	138.2	11.72	0.3254			15-8880-5349	18-5703-0746
5		Apr	11	182.3	55.88	1.343	(+)		19-4475-1025	00-2732-4149
6		May	11	200	73.53	1.683	(+)		04-3686-1214	17-7144-4708
7		Jun	13	117.6	-8.915	-0.2683			02-1194-6933	14-6655-2671
8		Jul	11	117.6	-8.915	-0.2683			18-9490-6426	20-8229-8763
9		Aug	12	104.7	-21.74	-0.6924			16-1269-6384	20-8498-8487
10		Sep	14	91.17	-35.3	-1.201	(-)		21-3997-4244	00-3631-7496
11		Oct	10	93.3	-33.17	-1.117	(-)		01-3925-6404	03-9134-1193
12		Nov	14	182.3	55.88	1.343	(+)		09-0829-7750	07-1545-0995
13		Dec	12	138.2	11.72	0.3254			02-0643-2090	02-3247-9401
14	2023	Jan	12	83.12	-43.35	-1.541	(-)		10-5717-9012	06-2162-7195
15		Feb	13	79.37	-47.1	-1.71	(-)		19-2977-9552	20-0081-1333
16		Mar	13	114.9	-11.6	-0.3532			14-1992-9075	20-3196-8530
17		Apr	14	148.1	21.64	0.5799			00-0643-4903	11-5830-8594
18		May	15	114.9	-11.6	-0.3532			06-5181-9947	15-0207-5859
19		Jun	13	151.6	25.1	0.6647			16-7900-9504	12-9379-3365
20		Jul	14	194.7	68.27	1.585	(+)		19-5463-0764	04-3793-4724
21		Aug	16	166.2	39.78	1.004	(+)		09-9289-7634	17-7520-8601

CETIS Summary Report

Report Date: 21 Aug-23 10:41 (p 1 of 1)
 Test Code: RA081623OM | 09-9289-7634

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	10-3512-0978	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	16 Aug-23 13:30	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	20 Aug-23 13:30	Species:	Oncorhynchus mykiss	Brine:	
Duration:	96h	Source:	Trout Lodge Fish Farm	Age:	55d
Sample ID:	09-7638-9830	Code:	RA081623OM	Client:	Internal Lab
Sample Date:	16 Aug-23	Material:	Copper sulfate	Project:	
Receive Date:	16 Aug-23	Source:	Reference Toxicant		
Sample Age:	14h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-5429-9781	96h Survival Rate	50	100	70.71	16.9%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-7520-8601	96h Survival Rate	LC50	166.2	141.5	195.3		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.8	0.7627	0.8373	0.7	0.9	0.05774	0.1	12.5%	20.0%
200		3	0.4333	0.3394	0.5273	0.2	0.7	0.1453	0.2517	58.08%	56.67%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.9	0.7	0.8
200		0.4	0.7	0.2
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		9/10	7/10	8/10
200		4/10	7/10	2/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



Laboratory Reference #: 08-254

Turnaround Request

1 Day 2 Day 3 Day

Project Number: Star Forge Waste Designation

Other: 1 Week

Project Name:

[illegible]

Chain of Custody

Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. **08-254**

Company:

DE Environmental

Project No.:

Project Name:

Star Forge Waste Disposition

Project Manager:

D. Hill

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Day

☒ 3 Day

☐ Standard

(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

(other)

Requested Analysis

Lab ID

Sample Identification

Date

Time

Matrix

of

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8) **+ Cu, Ni, Zn**

Priority Pollutant Metals (13)

TCLP Metals **Lead**

VPH

EPH

Fish Bioassay

% Moisture

1 NT-piping-soil-1

8/23/23

0815

Soil

4

X

X

X

X

(X)

(X)

1

2 NT-piping-soil-2

8/23/23

0825

Soil

4

X

X

X

X

(X)

(X)

1

3 NT-piping-soil-3

8/23/23

0835

Soil

4

X

X

X

X

(X)

(X)

1

RELINQUISHED BY

DATE

RECEIVED BY

DATE

COMMENTS:

FIRM

TIME

FIRM

TIME

RELINQUISHED BY

DATE

RECEIVED BY

DATE

FIRM

TIME

FIRM

TIME

REVIEWED BY

DATE REVIEWED

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 17, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2310-177

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 13, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on October 13, 2023 and received by the laboratory on October 13, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Chloroethane, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Gasoline Range Organics	220	7.8	NWTPH-Gx	10-16-23	10-16-23	O
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	65-126				
Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Gasoline	ND	4.8	NWTPH-Gx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	65-126				
Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Gasoline	ND	4.0	NWTPH-Gx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	65-126				



Date of Report: October 17, 2023
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Gasoline	ND	5.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-177-03							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				93	90	65-126		



Date of Report: October 17, 2023
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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-122				



Date of Report: October 17, 2023
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	74	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-160-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				75	73	65-122		



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Diesel Fuel #2	3400	140	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	860	290	NWTPH-Dx	10-16-23	10-16-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	129	50-150				

Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Diesel Range Organics	120	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	260	56	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				

Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Diesel Range Organics	ND	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	190	55	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Diesel Range Organics	ND	25	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	78	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-177-01									
	ORIG	DUP								
Diesel Fuel #2	2970	2830	NA	NA		NA	NA	5	40	
Lube Oil	759	801	NA	NA		NA	NA	5	40	
Surrogate:										
o-Terphenyl						129	121	50-150		



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Dichlorodifluoromethane	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Toluene	0.40	0.18	EPA 8260D	10-16-23	10-16-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
(trans) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	0.46	0.037	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	2.1	0.073	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.87	0.037	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0041	EPA 8260D	10-16-23	10-16-23	



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VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0016	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.0012	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0015	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-130</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0020	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	96	71-130				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0382	0.0378	0.0500	0.0500	76	76	30-160	1	26	
Chloromethane	0.0437	0.0437	0.0500	0.0500	87	87	59-131	0	26	
Vinyl Chloride	0.0387	0.0382	0.0500	0.0500	77	76	68-136	1	23	
Bromomethane	0.0439	0.0437	0.0500	0.0500	88	87	48-155	0	32	
Chloroethane	0.0471	0.0468	0.0500	0.0500	94	94	67-141	1	16	
Trichlorofluoromethane	0.0490	0.0484	0.0500	0.0500	98	97	76-127	1	19	
1,1-Dichloroethene	0.0469	0.0478	0.0500	0.0500	94	96	75-129	2	19	
Iodomethane	0.0454	0.0433	0.0500	0.0500	91	87	37-140	5	27	
Methylene Chloride	0.0470	0.0482	0.0500	0.0500	94	96	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0475	0.0481	0.0500	0.0500	95	96	79-133	1	15	
Methyl t-Butyl Ether	0.0520	0.0531	0.0500	0.0500	104	106	73-125	2	17	
1,1-Dichloroethane	0.0472	0.0473	0.0500	0.0500	94	95	79-125	0	17	
2,2-Dichloropropane	0.0478	0.0492	0.0500	0.0500	96	98	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0469	0.0473	0.0500	0.0500	94	95	75-131	1	15	
Bromochloromethane	0.0509	0.0521	0.0500	0.0500	102	104	80-126	2	15	
Chloroform	0.0474	0.0480	0.0500	0.0500	95	96	80-123	1	15	
1,1,1-Trichloroethane	0.0472	0.0478	0.0500	0.0500	94	96	78-124	1	21	
Carbon Tetrachloride	0.0480	0.0481	0.0500	0.0500	96	96	74-127	0	18	
1,1-Dichloropropene	0.0470	0.0480	0.0500	0.0500	94	96	80-123	2	15	
Benzene	0.0462	0.0459	0.0500	0.0500	92	92	80-122	1	18	
1,2-Dichloroethane	0.0502	0.0515	0.0500	0.0500	100	103	75-124	3	15	
Trichloroethene	0.0470	0.0473	0.0500	0.0500	94	95	80-129	1	18	
1,2-Dichloropropane	0.0481	0.0489	0.0500	0.0500	96	98	80-123	2	15	
Dibromomethane	0.0494	0.0512	0.0500	0.0500	99	102	80-123	4	15	
Bromodichloromethane	0.0495	0.0491	0.0500	0.0500	99	98	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0515	0.0521	0.0500	0.0500	103	104	80-130	1	15	
Toluene	0.0441	0.0446	0.0500	0.0500	88	89	80-120	1	18	
(trans) 1,3-Dichloropropene	0.0561	0.0567	0.0500	0.0500	112	113	80-124	1	15	



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 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0539	0.0576	0.0500	0.0500	108	115	80-120	7	15	
Tetrachloroethene	0.0515	0.0520	0.0500	0.0500	103	104	77-126	1	15	
1,3-Dichloropropane	0.0530	0.0554	0.0500	0.0500	106	111	77-123	4	15	
Dibromochloromethane	0.0549	0.0565	0.0500	0.0500	110	113	80-128	3	16	
1,2-Dibromoethane	0.0551	0.0570	0.0500	0.0500	110	114	80-122	3	20	
Chlorobenzene	0.0513	0.0523	0.0500	0.0500	103	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0521	0.0533	0.0500	0.0500	104	107	80-120	2	15	
Ethylbenzene	0.0504	0.0511	0.0500	0.0500	101	102	80-120	1	15	
m,p-Xylene	0.105	0.105	0.100	0.100	105	105	80-120	0	15	
o-Xylene	0.0519	0.0520	0.0500	0.0500	104	104	80-120	0	15	
Bromoform	0.0553	0.0584	0.0500	0.0500	111	117	78-126	5	15	
Bromobenzene	0.0525	0.0538	0.0500	0.0500	105	108	79-124	2	15	
1,1,2,2-Tetrachloroethane	0.0535	0.0563	0.0500	0.0500	107	113	75-122	5	17	
1,2,3-Trichloropropane	0.0560	0.0589	0.0500	0.0500	112	118	72-125	5	20	
2-Chlorotoluene	0.0525	0.0526	0.0500	0.0500	105	105	75-128	0	15	
4-Chlorotoluene	0.0556	0.0577	0.0500	0.0500	111	115	78-127	4	16	
1,3-Dichlorobenzene	0.0526	0.0538	0.0500	0.0500	105	108	78-123	2	17	
1,4-Dichlorobenzene	0.0547	0.0548	0.0500	0.0500	109	110	77-121	0	17	
1,2-Dichlorobenzene	0.0562	0.0569	0.0500	0.0500	112	114	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0569	0.0647	0.0500	0.0500	114	129	61-137	13	28	
1,2,4-Trichlorobenzene	0.0543	0.0530	0.0500	0.0500	109	106	77-127	2	17	
Hexachlorobutadiene	0.0456	0.0463	0.0500	0.0500	91	93	77-125	2	22	
1,2,3-Trichlorobenzene	0.0584	0.0593	0.0500	0.0500	117	119	77-124	2	19	
Surrogate:										
Dibromofluoromethane					98	97	75-130			
Toluene-d8					95	95	78-128			
4-Bromofluorobenzene					106	108	71-130			



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 Project: Star Forge UST Site Assessment

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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 Laboratory Reference: 2310-177
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>78-125</i>				



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 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	104	75-127				
Toluene-d8	106	80-127				
4-Bromofluorobenzene	102	78-125				



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Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD		Flags
					Recovery		Limits		RPD	Limit	
SPIKE BLANKS											
Laboratory ID:	SB1016W1										
	SB	SBD	SB	SBD	SB	SBD					
Dichlorodifluoromethane	11.4	9.59	10.0	10.0	114	96	34-166	17	21		
Chloromethane	7.69	6.63	10.0	10.0	77	66	63-138	15	18		
Vinyl Chloride	9.12	8.03	10.0	10.0	91	80	71-135	13	20		
Bromomethane	11.4	10.1	10.0	10.0	114	101	20-151	12	36		
Chloroethane	8.59	7.29	10.0	10.0	86	73	76-125	16	20	I	
Trichlorofluoromethane	10.3	9.42	10.0	10.0	103	94	75-131	9	19		
1,1-Dichloroethene	10.1	9.00	10.0	10.0	101	90	78-125	12	19		
Iodomethane	13.3	12.1	10.0	10.0	133	121	10-155	9	40		
Methylene Chloride	9.44	8.62	10.0	10.0	94	86	80-120	9	15		
(trans) 1,2-Dichloroethene	9.52	8.82	10.0	10.0	95	88	80-125	8	17		
Methyl t-Butyl Ether	10.1	9.23	10.0	10.0	101	92	80-122	9	15		
1,1-Dichloroethane	9.61	8.69	10.0	10.0	96	87	80-125	10	17		
2,2-Dichloropropane	11.5	10.9	10.0	10.0	115	109	80-146	5	21		
(cis) 1,2-Dichloroethene	10.0	9.32	10.0	10.0	100	93	80-129	7	17		
Bromochloromethane	9.81	9.31	10.0	10.0	98	93	80-125	5	18		
Chloroform	9.93	9.12	10.0	10.0	99	91	80-123	9	16		
1,1,1-Trichloroethane	10.1	9.13	10.0	10.0	101	91	80-123	10	18		
Carbon Tetrachloride	10.4	9.59	10.0	10.0	104	96	80-126	8	17		
1,1-Dichloropropene	10.0	9.31	10.0	10.0	100	93	80-126	7	18		
Benzene	9.37	8.53	10.0	10.0	94	85	80-121	9	16		
1,2-Dichloroethane	11.1	10.3	10.0	10.0	111	103	80-124	7	15		
Trichloroethene	10.5	9.54	10.0	10.0	105	95	80-122	10	18		
1,2-Dichloropropane	9.46	8.85	10.0	10.0	95	89	80-123	7	15		
Dibromomethane	10.4	9.64	10.0	10.0	104	96	80-123	8	15		
Bromodichloromethane	10.8	9.70	10.0	10.0	108	97	80-125	11	15		
(cis) 1,3-Dichloropropene	10.6	9.81	10.0	10.0	106	98	80-129	8	15		
Toluene	9.63	9.18	10.0	10.0	96	92	80-120	5	18		
(trans) 1,3-Dichloropropene	11.9	11.1	10.0	10.0	119	111	80-134	7	17		



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Analyte	Result	Spike Level	Percent		Recovery		RPD	Limit	Flags	
			Recovery	Limits						
SPIKE BLANKS										
Laboratory ID:	SB1016W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	9.87	10.0	10.0	100	99	77-126	1	20	
Tetrachloroethene	11.5	11.0	10.0	10.0	115	110	80-124	4	18	
1,3-Dichloropropane	10.5	10.1	10.0	10.0	105	101	80-120	4	15	
Dibromochloromethane	11.5	10.6	10.0	10.0	115	106	80-128	8	15	
1,2-Dibromoethane	11.6	10.6	10.0	10.0	116	106	80-127	9	15	
Chlorobenzene	11.2	11.0	10.0	10.0	112	110	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.2	10.9	10.0	10.0	112	109	80-125	3	17	
Ethylbenzene	11.0	10.6	10.0	10.0	110	106	80-125	4	18	
m,p-Xylene	22.3	21.7	20.0	20.0	112	109	80-127	3	18	
o-Xylene	10.9	10.7	10.0	10.0	109	107	80-126	2	18	
Bromoform	12.6	12.0	10.0	10.0	126	120	80-130	5	15	
Bromobenzene	11.1	10.5	10.0	10.0	111	105	76-128	6	16	
1,1,2,2-Tetrachloroethane	10.3	10.3	10.0	10.0	103	103	74-130	0	15	
1,2,3-Trichloropropane	9.95	9.79	10.0	10.0	100	98	71-129	2	25	
2-Chlorotoluene	11.2	11.4	10.0	10.0	112	114	80-128	2	18	
4-Chlorotoluene	11.4	11.2	10.0	10.0	114	112	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.4	10.0	10.0	116	114	80-126	2	17	
1,4-Dichlorobenzene	11.3	11.3	10.0	10.0	113	113	80-121	0	17	
1,2-Dichlorobenzene	11.4	11.3	10.0	10.0	114	113	79-125	1	15	
1,2-Dibromo-3-chloropropane	11.7	11.4	10.0	10.0	117	114	73-133	3	15	
1,2,4-Trichlorobenzene	13.6	14.5	10.0	10.0	136	145	80-139	6	18	I
Hexachlorobutadiene	12.8	13.1	10.0	10.0	128	131	80-151	2	18	
1,2,3-Trichlorobenzene	13.9	15.1	10.0	10.0	139	151	75-146	8	28	I
Surrogate:										
Dibromofluoromethane					104	102	75-127			
Toluene-d8					111	109	80-127			
4-Bromofluorobenzene					100	103	78-125			



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Naphthalene	2.1	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	6.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
1-Methylnaphthalene	4.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
Benzo[a]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.071	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.045	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.034	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	69	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	76	44-121				

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Naphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.11	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.18	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.056	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.16	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.031	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Naphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.57	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.59	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.68	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.23	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.63	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.37	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.088	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	74	39-111				
<i>Pyrene-d10</i>	87	47-114				
<i>Terphenyl-d14</i>	92	44-121				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	87	47-114				
Terphenyl-d14	92	44-121				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0700	0.0664	0.0833	0.0833	84	80	57-116	5	16	
Acenaphthylene	0.0796	0.0743	0.0833	0.0833	96	89	59-124	7	15	
Acenaphthene	0.0749	0.0709	0.0833	0.0833	90	85	59-124	5	15	
Fluorene	0.0739	0.0752	0.0833	0.0833	89	90	62-122	2	15	
Phenanthrene	0.0685	0.0776	0.0833	0.0833	82	93	62-119	12	15	
Anthracene	0.0749	0.0863	0.0833	0.0833	90	104	64-123	14	15	
Fluoranthene	0.0757	0.0820	0.0833	0.0833	91	98	63-123	8	15	
Pyrene	0.0772	0.0822	0.0833	0.0833	93	99	62-124	6	15	
Benzo[a]anthracene	0.0756	0.0754	0.0833	0.0833	91	91	59-131	0	15	
Chrysene	0.0784	0.0790	0.0833	0.0833	94	95	61-124	1	15	
Benzo[b]fluoranthene	0.0783	0.0764	0.0833	0.0833	94	92	60-126	2	15	
Benzo(j,k)fluoranthene	0.0827	0.0847	0.0833	0.0833	99	102	63-121	2	17	
Benzo[a]pyrene	0.0783	0.0785	0.0833	0.0833	94	94	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0760	0.0777	0.0833	0.0833	91	93	58-127	2	15	
Dibenz[a,h]anthracene	0.0833	0.0849	0.0833	0.0833	100	102	60-124	2	15	
Benzo[g,h,i]perylene	0.0808	0.0817	0.0833	0.0833	97	98	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					80	76	39-111			
Pyrene-d10					83	88	47-114			
Terphenyl-d14					92	92	44-121			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID:	10-177-01					
Aroclor 1016	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID: ST-piping-SS-21-2.0						
Laboratory ID:	10-177-02					
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				
Client ID: ST-piping-SS-22-2.0						
Laboratory ID:	10-177-03					
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1016S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.428	0.432	0.500	0.500	N/A	86	86	55-119	1	34	
Surrogate:											
DCB						92	91	50-127			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Arsenic	31	11	EPA 6010D	10-13-23	10-13-23	
Barium	82	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	0.85	0.57	EPA 6010D	10-13-23	10-13-23	
Chromium	25	0.57	EPA 6010D	10-13-23	10-13-23	
Copper	67	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	49	5.7	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	94	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	280	2.8	EPA 6010D	10-13-23	10-13-23	

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	41	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	55	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	56	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	64	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	44	2.8	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	33	2.7	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	20	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	30	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.27	EPA 7471B	10-16-23	10-16-23	
Nickel	58	2.7	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	43	2.7	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013SM1					
Arsenic	ND	10	EPA 6010D	10-13-23	10-13-23	
Barium	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Chromium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Copper	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Lead	ND	5.0	EPA 6010D	10-13-23	10-13-23	
Nickel	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	10	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Zinc	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Laboratory ID:	MB1016S1					
Mercury	ND	0.25	EPA 7471B	10-16-23	10-16-23	



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-091-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	18.0	17.5	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	9.65	9.10	NA	NA	NA	NA	6	20
Copper	16.6	17.8	NA	NA	NA	NA	7	20
Lead	24.5	27.9	NA	NA	NA	NA	13	20
Nickel	7.25	7.35	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	43.8	42.7	NA	NA	NA	NA	3	20

Laboratory ID:	10-089-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-091-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	102	101	100	100	ND	102	101	75-125	1	20
Barium	116	115	100	100	18.0	98	97	75-125	1	20
Cadmium	47.3	46.4	50.0	50.0	ND	95	93	75-125	2	20
Chromium	109	107	100	100	9.65	100	97	75-125	2	20
Copper	67.1	65.7	50.0	50.0	16.6	101	98	75-125	2	20
Lead	282	275	250	250	24.5	103	100	75-125	2	20
Nickel	108	105	100	100	7.25	101	98	75-125	2	20
Selenium	94.0	93.1	100	100	ND	94	93	75-125	1	20
Silver	24.6	24.0	25.0	25.0	ND	98	96	75-125	2	20
Zinc	139	139	100	100	43.8	95	95	75-125	0	20

Laboratory ID:	10-089-02									
Mercury	0.509	0.527	0.500	0.500	0.0446	93	97	80-120	3	20



Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
ST-piping-SS-20-6.5	10-177-01	12	10-13-23
ST-piping-SS-21-2.0	10-177-02	10	10-13-23
ST-piping-SS-22-2.0	10-177-03	9	10-13-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.qnsite-env.com

Turnaround Request
(in working days)

Laboratory Number: 10-177

[illegible]

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report

August 01, 2023 to October 24, 2023
Specific Contract(s) : 'TB11606b'

All Facilities

TB11606B

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
08/14/2023 I	3A 5329271	015590 - Construction Group Interna	7331	Cont Soil	0.00 S	29.52 TN						
08/14/2023 I	3A 5329272	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	34.75 TN						
08/14/2023 I	3A 5329281	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	31.54 TN						
08/14/2023 I	3A 5329292	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	28.76 TN						
08/14/2023 I	3A 5329296	015590 - Construction Group Interna	7331	Cont Soil	0.00 S	30.56 TN						
08/15/2023 I	3A 5329304	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	30.60 TN						
08/15/2023 I	3A 5329310	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	30.86 TN						
08/15/2023 I	3A 5329343	015590 - Construction Group Interna	0332	Cont Soil	0.00 S	23.02 TN						
08/22/2023 I	3A 5329493	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	22.49 TN						
08/23/2023 I	3A 5329573	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	20.35 TN						
08/23/2023 I	3A 5329577	015590 - Construction Group Interna	0331	Cont Soil	0.00 S	21.72 TN						
08/24/2023 I	3A 5329589	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	23.19 TN						
08/25/2023 I	3A 5329593	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	26.79 TN						
08/26/2023 I	3A 5329685	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	24.10 TN						
08/26/2023 I	3A 5329688	015590 - Construction Group Interna	5833	Cont Soil	0.00 S	23.38 TN						
08/26/2023 I	3A 5329695	015590 - Construction Group Interna	7329	Cont Soil	0.00 S	26.68 TN						
08/31/2023 I	3A 5329813	015590 - Construction Group Interna	WSB	Trucking	160.00 F	13.50 HR						
08/31/2023 I	3A 5329866	015590 - Construction Group Interna	WSB	Trucking	160.00 F	8.00 HR						
10/20/2023 I	3A 5331130	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	19.51 TN						
10/24/2023 I	3A 5331165	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	16.04 TN						
10/24/2023 I	3A 5331176	015590 - Construction Group Interna	3517	Cont Soil	0.00 S	14.51 TN						
10/24/2023 I	3A 5331181	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	21.14 TN						
10/24/2023 I	3A 5331184	015590 - Construction Group Interna	3517	Cont Soil	0.00 S	17.86 TN						
10/24/2023 I	3A 5331192	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	19.80 TN						

Tickets Reported: 24 Items Reported: 24

Material Summary	Weight			Volume			Count		Billing Quantity	Material Total	Tax Total	Total
	Inbound	Outbound		Inbound	Outbound		Inbound	Outbound				
66 - Cont Soil	537.17	0.00 TN		587.15	0.00 YD		0.00	0.00	537.17 TN			
TR - Trucking	0.00	0.00 TN		0.00	0.00 YD		21.50	0.00	21.50 HR			

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report
August 01, 2023 to October 24, 2023
Specific Contract(s) : 'TB11606b'

All Facilities

Tickets Reported:		24	Items Reported:		24	Cash Totals:
						Invoice Totals:
						Report Totals:

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Facilities

All Ticket Types

History and Waiting

* - Confirmed Qty Applied to Billing

TB-11606

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
08/11/2023	I 01 1016015	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		21.63 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016017	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		21.07 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016022	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.74 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016024	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		18.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016028	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.66 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016030	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.64 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016032	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016033	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.72 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016036	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.72 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016038	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.18 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016043	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.82 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016044	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		17.24 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016047	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.30 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016048	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		11.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016052	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.61 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016053	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.08 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016058	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.12 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016059	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.42 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016077	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		14.45 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016078	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.60 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016079	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		14.01 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016081	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.14 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016082	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.38 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016085	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.96 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016087	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.61 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016088	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.92 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016093	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.79 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016094	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.37 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016095	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.47 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016100	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016101	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		14.30 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016102	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		20.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016108	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.09 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016111	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		16.18 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016112	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		17.69 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016117	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016119	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.51 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016120	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.10 TN	0.00	\$0.00	\$0.00			

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08/14/2023	I	01	1016121	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016123	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.07	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016125	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.14	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016130	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.60	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016131	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016132	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	18.35	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016137	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.94	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016138	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.39	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016141	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	18.58	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016142	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.05	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016146	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.90	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016147	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.05	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016150	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.28	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016153	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.15	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016155	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.76	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016157	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.05	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016163	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.05	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016164	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.90	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016165	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.43	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016167	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.62	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016168	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.54	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016169	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.47	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016170	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.04	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016171	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.39	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016172	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.17	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016174	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.70	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016178	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	10.83	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016179	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	12.70	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016180	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.78	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016183	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.00	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016184	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.61	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016185	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.77	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016190	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.91	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016191	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.92	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016192	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.10	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016197	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.37	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016198	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.11	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016199	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.86	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016205	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.66	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016206	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.02	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016207	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.32	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016209	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.19	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016210	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.94	TN	0.00	\$0.00	\$0.00

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08/15/2023	I	01	1016211	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.47	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016216	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.63	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016217	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.11	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016218	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.15	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016219	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.30	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016220	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.83	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016221	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.63	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016226	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.17	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016227	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.21	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016229	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.17	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016230	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.12	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016231	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016232	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016233	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.66	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016234	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.79	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016238	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.26	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016240	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.25	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016242	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.64	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016245	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.76	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016246	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.93	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016247	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.83	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016254	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.75	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016255	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.58	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016257	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.43	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016261	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.75	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016263	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	18.65	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016265	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.29	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016271	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.96	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016272	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016274	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.55	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016280	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.68	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016281	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.32	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016282	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.84	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016283	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	17.23	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016284	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.58	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016285	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.33	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016291	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.53	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016292	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.83	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016293	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.57	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016296	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	17.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016297	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.91	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016298	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016300	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.63	TN	0.00	\$0.00	\$0.00

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08/16/2023	I	01	1016301	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016303	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.15	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016304	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	16.64	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016305	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.85	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016306	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.25	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016309	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	17.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016310	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	16.18	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016311	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.79	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016312	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.39	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016313	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	16.13	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016314	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.77	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016315	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	16.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016316	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.27	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016317	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.88	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016318	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	16.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016321	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	14.74	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016322	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	16.96	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016323	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.49	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016324	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.74	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016325	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.93	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016326	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	9.94	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016328	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	12.80	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016329	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	12.35	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016330	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.52	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016331	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.73	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016332	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.10	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016336	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	12.39	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016338	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.18	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016340	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.42	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016342	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.19	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016343	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.82	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016346	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.53	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016347	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.85	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016348	015590 - Construction Group Internal	101 WA UN	SW-CONT SOIL	14.31	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016349	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016350	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.24	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016351	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.67	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016353	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.62	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016357	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	12.24	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016358	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.06	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016359	015590 - Construction Group Internal	101 WA UN	SW-CONT SOIL	11.20	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016360	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.82	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016361	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.48	TN	0.00	\$0.00	\$0.00

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Ticket Types

History and Waiting

All Facilities

* - Confirmed Qty Applied to Billing

08/17/2023	I	01	1016362	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016363	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.22	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016364	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.86	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016365	015590 - Construction Group Internal	101 WA UM	SW-CONT SOIL	12.54	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016367	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.59	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016369	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.01	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016372	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.08	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016373	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.25	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016374	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.98	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016375	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	14.20	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016376	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.59	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016377	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.22	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016379	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.61	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016380	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016381	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	10.91	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016382	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.71	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016384	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.77	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016385	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.97	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016386	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.99	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016387	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.48	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016388	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.61	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016389	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.09	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016390	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.07	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016391	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.79	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016392	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.66	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016393	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.04	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016394	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.28	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016395	015590 - Construction Group Internal	101 WA UM	SW-CONT SOIL	14.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016396	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.28	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016397	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.36	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016398	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.76	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016399	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.58	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016400	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.83	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016424	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.80	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016425	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.33	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016426	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.43	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016427	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.32	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016428	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.87	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016429	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.53	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016430	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.94	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016431	015590 - Construction Group Internal	T-2 TONGU	SW-CONT SOIL	10.54	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016433	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.83	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016434	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.59	TN	0.00	\$0.00	\$0.00

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Facilities

All Ticket Types
History and Waiting

* - Confirmed Qty Applied to Billing

08/21/2023	I	01	1016435	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.07	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016436	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.16	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016438	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.13	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016439	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.75	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016440	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016441	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.37	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016443	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	10.03	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016444	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	9.39	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016445	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	9.73	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016447	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	8.76	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016448	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	8.12	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016449	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	7.80	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016482	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.96	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016483	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.20	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016484	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.07	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016485	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	11.64	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016488	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.22	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016489	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	8.01	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016490	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.72	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016491	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	10.12	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016494	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	17.56	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016495	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016497	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.68	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016498	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	11.40	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016500	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	18.29	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016501	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.03	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016503	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	20.25	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016504	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.80	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016506	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	21.12	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016508	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	17.06	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016509	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.93	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016511	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	15.59	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016513	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.14	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016514	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.29	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016516	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016517	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	14.73	TN	0.00	\$0.00	\$0.00

Tickets Reported: 246 Items Reported: 246

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report
August 01, 2023 to August 23, 2023
Specific Contract(s) : 'tb-11606'

All Facilities

Material Summary		Weight		Volume		Count		Billing	Material Total	Tax Total	Total
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Quantity			
VG - SW-CONT SOIL		3,545.42	0.00 TN	0.00	0.00 YD	0.00	0.00	3,545.42 TN			
								Cash Totals:			
								Invoice Totals:			
								Report Totals:			



DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site, UST Piping Utilidor Water

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: **Water**

Generation Process: **Pump out of UST Piping Utilidor**

RCRA ID Number that waste will be managed under:

NA

Total Quantity and/or Estimated Generation rate:

~ 275 gallons

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☒ Liquid (If liquid, indicate if the liquid is:
☒ Single Layer
☐ Multi-layer

pH: ☐ < 2 **[D002]**
☒ > 2 but < 12.5
☐ N/A ☐ > 12.5 **[D002]**

Flashpoint: ☐ < 140 °F **[D001]**
☒ > 140 °F but < 200 °F
☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals																																				
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table><tbody><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>170</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>60</td><td>☐ ND</td></tr><tr><td>Copper:</td><td>240</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>220</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td>110</td><td>☐ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Zinc:</td><td>730</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></tbody></table>	Arsenic:		☒ ND	Barium:	170	☐ ND	Cadmium:		☒ ND	Chromium:	60	☐ ND	Copper:	240	☐ ND	Lead:	220	☐ ND	Mercury:		☒ ND	Nickel:	110	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Zinc:	730	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	170	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	60	☐ ND																																					
Copper:	240	☐ ND																																					
Lead:	220	☐ ND																																					
Mercury:		☒ ND																																					
Nickel:	110	☐ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Zinc:	730	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
water	90-100
Oils, sludge, debris	0 - 10



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

Analysis has identified trace constituents listed in 40 CFR 261.31, *Wastes from Non-Specific Sources*. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents: "Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste." - Management of Remediation Waste Under RCRA, EPA530-F-98-026

Analysis has also identified constituents potentially exhibiting toxicity characteristics. However, in accordance with 40 CFR 261.4 (b)(10), these compounds are not considered hazardous waste, because the impacted media was removed as part of a UST Corrective Action.

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100. The calculated equivalent concentration value was less than 0.001%, **this waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2310-156)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:



F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste

USDOT Proper Shipping Name:

RCRA Waste Codes:

☐ TSCA Regulated Waste

TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description: Non-hazardous waste, liquid

Designation Performed by: Nathan Moxley, LHG

Title: Senior Geologist

Date: 10-16-2023

Designation Reviewed by: Dave Hill, PE, CHMM

Title: Principal Engineer

Date: 10-16-2023

Book Designation: Jorgensen UST Piping Utilidor, Water Designation

Waste Stream: Water

Sample IDs: "UST Piping Utilidor"

Sample Date: 10/12/23

Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		μg/L	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	170	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	60	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				6.00E-06	
Copper	7440-50-8	240	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		2.40E-05			
Lead	7439-92-1	220	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.20E-05	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.10E-05
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	730	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			7.30E-05		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	51	LC Rat Inhalation 50.10 mg/kg ¹	D					5.10E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					

1,1-Dichloropropene	563-58-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	10	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				1.00E-06	
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	100	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				1.00E-05	
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	84	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				8.40E-06	
m,p-Xylene	108-38-3, 106-42-3	370	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				3.70E-05	
o-Xylene	95-47-6	170	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				1.70E-05	
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	31	1400 mg/kg Oral Rat LD50 ²	D					3.10E-06
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	66	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	120	LD50 Oral Rat 5000 mg/kg ¹	D					1.20E-05
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	410	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				4.10E-05	
sec-Butylbenzene	135-98-8	42	2240 mg/kg Oral Rat LD50 ²	D					4.20E-06
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	38	LD50 Rat oral 4750 mg/kg ²	D					3.80E-06
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	360	LD50 Oral Rat 490 mg/kg ³	C				3.60E-05	
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					

Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
Total (SUM)						0.0000000	0.0000240	0.0000730	0.0001784
									0.0000

						EC	Designation
Enter Category Mass % Here							
						0.00E+00	2.40E-05
						0.00E+00	2.40E-06
						7.30E-05	7.30E-07
						1.78E-04	1.78E-07
						3.92E-05	3.92E-09
						0.0000033	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 13, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2310-156

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on October 12, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-156
Project: Star Forge

Case Narrative

Samples were collected on October 12, 2023 and received by the laboratory on October 12, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PCBs EPA 8082A Analysis

Sample matrix effects caused the percent recovery for the surrogate DCB in the sample UST Piping Utilidor (30%) to be below the quality control limits of 55-138%. All other QC associated with this sample batch was within limits. No further action was undertaken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Dichlorodifluoromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chloromethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Vinyl Chloride	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromomethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Chloroethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Trichlorofluoromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Acetone	51	50	EPA 8260D	10-13-23	10-13-23	
Iodomethane	ND	50	EPA 8260D	10-13-23	10-13-23	
Carbon Disulfide	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methylene Chloride	ND	10	EPA 8260D	10-13-23	10-13-23	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methyl t-Butyl Ether	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Vinyl Acetate	ND	10	EPA 8260D	10-13-23	10-13-23	
2,2-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
2-Butanone	ND	50	EPA 8260D	10-13-23	10-13-23	
Bromochloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chloroform	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,1-Trichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Carbon Tetrachloride	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Benzene	10	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Trichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Dibromomethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromodichloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methyl Isobutyl Ketone	ND	20	EPA 8260D	10-13-23	10-13-23	
Toluene	100	10	EPA 8260D	10-13-23	10-13-23	
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
1,1,2-Trichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Tetrachloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,3-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
2-Hexanone	ND	20	EPA 8260D	10-13-23	10-13-23	
Dibromochloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromoethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Ethylbenzene	84	2.0	EPA 8260D	10-13-23	10-13-23	
m,p-Xylene	370	4.0	EPA 8260D	10-13-23	10-13-23	
o-Xylene	170	2.0	EPA 8260D	10-13-23	10-13-23	
Styrene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromoform	ND	10	EPA 8260D	10-13-23	10-13-23	
Isopropylbenzene	31	2.0	EPA 8260D	10-13-23	10-13-23	
Bromobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
n-Propylbenzene	66	2.0	EPA 8260D	10-13-23	10-13-23	
2-Chlorotoluene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
4-Chlorotoluene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,3,5-Trimethylbenzene	120	2.0	EPA 8260D	10-13-23	10-13-23	
tert-Butylbenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trimethylbenzene	410	2.0	EPA 8260D	10-13-23	10-13-23	
sec-Butylbenzene	42	2.0	EPA 8260D	10-13-23	10-13-23	
1,3-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
p-Isopropyltoluene	38	2.0	EPA 8260D	10-13-23	10-13-23	Y
1,4-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
n-Butylbenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromo-3-chloropropane	ND	10	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Hexachlorobutadiene	ND	10	EPA 8260D	10-13-23	10-13-23	
Naphthalene	360	10	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Surrogate:		Percent Recovery	Control Limits			
Dibromofluoromethane	101		75-127			
Toluene-d8	110		80-127			
4-Bromofluorobenzene	101		78-125			



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Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chloromethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromomethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Chloroethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Acetone	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Iodomethane	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Carbon Disulfide	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-13-23	10-13-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Vinyl Acetate	ND	1.0	EPA 8260D	10-13-23	10-13-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Butanone	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chloroform	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Benzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Trichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Dibromomethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Toluene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Hexanone	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-13-23	10-13-23	
o-Xylene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Styrene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromoform	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Isopropylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
n-Propylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
n-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Naphthalene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	13.3	11.1	10.0	10.0	133	111	34-166	18	21	
Chloromethane	8.14	7.18	10.0	10.0	81	72	63-138	13	18	
Vinyl Chloride	9.66	8.35	10.0	10.0	97	84	71-135	15	20	
Bromomethane	12.2	11.3	10.0	10.0	122	113	20-151	8	36	
Chloroethane	9.47	8.15	10.0	10.0	95	82	76-125	15	20	
Trichlorofluoromethane	10.1	8.81	10.0	10.0	101	88	75-131	14	19	
1,1-Dichloroethene	9.63	8.58	10.0	10.0	96	86	78-125	12	19	
Acetone	8.25	8.56	10.0	10.0	83	86	76-125	4	18	
Iodomethane	10.8	10.5	10.0	10.0	108	105	10-155	3	40	
Carbon Disulfide	8.42	7.65	10.0	10.0	84	77	58-129	10	17	
Methylene Chloride	8.68	7.84	10.0	10.0	87	78	80-120	10	15	I
(trans) 1,2-Dichloroethene	8.93	8.14	10.0	10.0	89	81	80-125	9	17	
Methyl t-Butyl Ether	8.45	7.56	10.0	10.0	85	76	80-122	11	15	I
1,1-Dichloroethane	9.08	8.10	10.0	10.0	91	81	80-125	11	17	
Vinyl Acetate	9.72	8.82	10.0	10.0	97	88	80-131	10	15	
2,2-Dichloropropane	10.6	9.84	10.0	10.0	106	98	80-146	7	21	
(cis) 1,2-Dichloroethene	9.31	8.32	10.0	10.0	93	83	80-129	11	17	
2-Butanone	9.02	8.66	10.0	10.0	90	87	80-129	4	16	
Bromochloromethane	9.06	7.82	10.0	10.0	91	78	80-125	15	18	I
Chloroform	9.15	8.24	10.0	10.0	92	82	80-123	10	16	
1,1,1-Trichloroethane	9.34	8.45	10.0	10.0	93	85	80-123	10	18	
Carbon Tetrachloride	9.78	8.67	10.0	10.0	98	87	80-126	12	17	
1,1-Dichloropropene	9.38	8.39	10.0	10.0	94	84	80-126	11	18	
Benzene	8.92	8.08	10.0	10.0	89	81	80-121	10	16	
1,2-Dichloroethane	9.77	8.95	10.0	10.0	98	90	80-124	9	15	
Trichloroethene	10.1	8.99	10.0	10.0	101	90	80-122	12	18	
1,2-Dichloropropane	9.76	8.20	10.0	10.0	98	82	80-123	17	15	L
Dibromomethane	9.55	8.14	10.0	10.0	96	81	80-123	16	15	L
Bromodichloromethane	9.65	8.46	10.0	10.0	97	85	80-125	13	15	
(cis) 1,3-Dichloropropene	9.66	8.76	10.0	10.0	97	88	80-129	10	15	
Methyl Isobutyl Ketone	9.60	8.48	10.0	10.0	96	85	80-124	12	15	
Toluene	9.41	8.34	10.0	10.0	94	83	80-120	12	18	
(trans) 1,3-Dichloropropene	11.1	10.1	10.0	10.0	111	101	80-134	9	17	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 2 of 2

Analyte	Result		Spike Level		Percent		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.55	8.76	10.0	10.0	96	88	77-126	9	20	L
Tetrachloroethene	12.0	10.8	10.0	10.0	120	108	80-124	11	18	
1,3-Dichloropropane	10.0	8.86	10.0	10.0	100	89	80-120	12	15	
2-Hexanone	9.89	9.59	10.0	10.0	99	96	80-130	3	16	
Dibromochloromethane	10.2	9.22	10.0	10.0	102	92	80-128	10	15	
1,2-Dibromoethane	9.54	9.01	10.0	10.0	95	90	80-127	6	15	
Chlorobenzene	11.0	9.90	10.0	10.0	110	99	80-120	11	17	
1,1,1,2-Tetrachloroethane	10.8	9.82	10.0	10.0	108	98	80-125	10	17	
Ethylbenzene	11.1	10.2	10.0	10.0	111	102	80-125	8	18	
m,p-Xylene	22.5	20.9	20.0	20.0	113	105	80-127	7	18	
o-Xylene	10.9	10.1	10.0	10.0	109	101	80-126	8	18	
Styrene	10.9	10.1	10.0	10.0	109	101	80-130	8	17	
Bromoform	10.7	9.73	10.0	10.0	107	97	80-130	9	15	
Isopropylbenzene	11.3	10.5	10.0	10.0	113	105	80-129	7	18	
Bromobenzene	10.4	8.98	10.0	10.0	104	90	76-128	15	16	
1,1,2,2-Tetrachloroethane	9.44	7.78	10.0	10.0	94	78	74-130	19	15	
1,2,3-Trichloropropane	8.95	7.63	10.0	10.0	90	76	71-129	16	25	
n-Propylbenzene	11.9	10.4	10.0	10.0	119	104	80-129	13	19	
2-Chlorotoluene	11.3	9.82	10.0	10.0	113	98	80-128	14	18	
4-Chlorotoluene	11.3	9.92	10.0	10.0	113	99	80-130	13	19	
1,3,5-Trimethylbenzene	11.6	9.95	10.0	10.0	116	100	80-131	15	18	
tert-Butylbenzene	11.6	10.1	10.0	10.0	116	101	80-130	14	18	
1,2,4-Trimethylbenzene	11.7	10.3	10.0	10.0	117	103	80-130	13	18	
sec-Butylbenzene	11.8	10.8	10.0	10.0	118	108	80-130	9	18	
1,3-Dichlorobenzene	11.5	10.1	10.0	10.0	115	101	80-126	13	17	
p-Isopropyltoluene	12.2	11.0	10.0	10.0	122	110	80-132	10	18	
1,4-Dichlorobenzene	11.0	9.85	10.0	10.0	110	99	80-121	11	17	
1,2-Dichlorobenzene	10.8	9.97	10.0	10.0	108	100	79-125	8	15	
n-Butylbenzene	12.4	11.8	10.0	10.0	124	118	80-138	5	19	
1,2-Dibromo-3-chloropropane	9.27	8.38	10.0	10.0	93	84	73-133	10	15	
1,2,4-Trichlorobenzene	11.5	11.8	10.0	10.0	115	118	80-139	3	18	
Hexachlorobutadiene	11.2	12.3	10.0	10.0	112	123	80-151	9	18	
Naphthalene	10.7	11.1	10.0	10.0	107	111	68-144	4	25	
1,2,3-Trichlorobenzene	10.6	11.8	10.0	10.0	106	118	75-146	11	28	
Surrogate:										
Dibromofluoromethane					101	99	75-127			
Toluene-d8					112	108	80-127			
4-Bromofluorobenzene					100	101	78-125			



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Aroclor 1016	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1221	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1232	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1242	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1248	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1254	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1260	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1262	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1268	ND	0.058	EPA 8082A	10-13-23	10-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	30	55-138				Q



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Aroclor 1016	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	80	55-138				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.459	0.463	0.500	0.500	N/A	92	93	66-120	1	16
Surrogate:										
DCB						92	87	55-138		



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

TOTAL METALS
EPA 6010D/7470A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Arsenic	ND	200	EPA 6010D	10-12-23	10-12-23	
Barium	170	50	EPA 6010D	10-12-23	10-12-23	
Cadmium	ND	10	EPA 6010D	10-12-23	10-12-23	
Chromium	60	10	EPA 6010D	10-12-23	10-12-23	
Copper	240	20	EPA 6010D	10-12-23	10-12-23	
Lead	220	100	EPA 6010D	10-12-23	10-12-23	
Mercury	ND	0.50	EPA 7470A	10-12-23	10-12-23	
Nickel	110	50	EPA 6010D	10-12-23	10-12-23	
Selenium	ND	200	EPA 6010D	10-12-23	10-12-23	
Silver	ND	20	EPA 6010D	10-12-23	10-12-23	
Zinc	730	50	EPA 6010D	10-12-23	10-12-23	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012WH2					
Arsenic	ND	200	EPA 6010D	10-12-23	10-12-23	
Barium	ND	50	EPA 6010D	10-12-23	10-12-23	
Cadmium	ND	10	EPA 6010D	10-12-23	10-12-23	
Chromium	ND	10	EPA 6010D	10-12-23	10-12-23	
Copper	ND	20	EPA 6010D	10-12-23	10-12-23	
Lead	ND	100	EPA 6010D	10-12-23	10-12-23	
Nickel	ND	50	EPA 6010D	10-12-23	10-12-23	
Selenium	ND	200	EPA 6010D	10-12-23	10-12-23	
Silver	ND	20	EPA 6010D	10-12-23	10-12-23	
Zinc	ND	50	EPA 6010D	10-12-23	10-12-23	
Laboratory ID:	MB1012W2					
Mercury	ND	0.50	EPA 7470A	10-12-23	10-12-23	



Date of Report: October 13, 2023
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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-116-10							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	ND	ND	NA	NA	NA	NA	NA	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	ND	ND	NA	NA	NA	NA	NA	20
Copper	ND	ND	NA	NA	NA	NA	NA	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	10-117-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-116-10									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	1970	2120	2000	2000	ND	99	106	75-125	7	20
Barium	2200	2260	2000	2000	ND	110	113	75-125	3	20
Cadmium	997	1020	1000	1000	ND	100	102	75-125	2	20
Chromium	2080	2120	2000	2000	ND	104	106	75-125	2	20
Copper	1060	1070	1000	1000	ND	106	107	75-125	2	20
Lead	5420	5510	5000	5000	ND	108	110	75-125	2	20
Nickel	2180	2230	2000	2000	ND	109	111	75-125	2	20
Selenium	2020	2030	2000	2000	ND	101	102	75-125	0	20
Silver	530	542	500	500	ND	106	108	75-125	2	20
Zinc	2120	2170	2000	2000	ND	106	108	75-125	2	20

Laboratory ID:	10-117-01									
Mercury	6.48	6.33	6.25	6.25	ND	104	101	75-125	2	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Page 1 of 1

Turnaround Request
(in working days)

Laboratory Number: **70-156**

Company: <u>DH Environmental</u>						(Check One)						
Project Number:						☐ Same Day ☒ 1st Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)						
Project Name: <u>Star Force</u>												
Project Manager: <u>N. Mokey AD-Hill</u>												
Sampled by: <u>D. Hill</u>						☒ Best Available (other)						
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers							
1	UST Biping Utkidoo	10/12/23	1115	Water	6							
						NWTPH-HCID						
						NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)						
						NWTPH-Gx						
						NWTPH-Dx (SG Clean-up ☐)						
						☒ Volatiles 8260						
						Halogenated Volatiles 8260						
						EDB EPA 8011 (Waters Only)						
						Semivolatiles 8270/SIM (with low-level PAHs) PAHs 8270/SIM (low-level)						
						☒ PCBs 8082						
						Organochlorine Pesticides 8081						
						Organophosphorus Pesticides 8270/SIM						
						Chlorinated Acid Herbicides 8151						
						☒ Total RCRA Metals + Cu, Ni, Zn						
						Total MTCA Metals						
						TCLP Metals						
						HEM (oil and grease) 1664						
						% Moisture						
Signature		Company		Date	Time	Comments/Special Instructions						
<u>[Signature]</u>		DH Environmental		10/14/23	1250							
<u>[Signature]</u>		DSC		10/12/23	1250							
Relinquished												
Received												
Relinquished												
Received												
Relinquished												
Received												
Reviewed/Date		Reviewed/Date		Data Package: Standard ☒ Level III ☐ Level IV ☐ Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐								



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 31, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-250

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-250
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 21 and 22, 2023 and received by the laboratory on August 22, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D (Water) Analysis

The percent recovery for 1,1,2,2-Tetrachloroethane is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Volatiles EPA 8260D (Soil) Analysis

The percent recovery for Dibromomethane is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

The RPD for Dibromomethane is outside the control limits for the Spike Blank/Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID:	08-250-01					
Gasoline	ND	6.4	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				
Client ID: NT-piping-SS-25-2.0-082123						
Laboratory ID:	08-250-02					
Gasoline	ND	5.2	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-piping-SS-26-2.0-082123						
Laboratory ID:	08-250-03					
Gasoline	ND	4.8	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-29-6.5-082223						
Laboratory ID:	08-250-04					
Gasoline	ND	4.9	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-30-6.5-082223						
Laboratory ID:	08-250-05					
Gasoline	ND	5.8	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: NT-SS-31-6.5-082223						
Laboratory ID:	08-250-06					
Gasoline Range Organics	80	4.9	NWTPH-Gx	8-24-23	8-24-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-32-6.5-082223						
Laboratory ID:	08-250-07					
Gasoline	ND	5.3	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-126				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-33-6.5-082223						
Laboratory ID:	08-250-08					
Gasoline	ND	5.7	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				
Client ID: NT-SS-34-6.5-082223						
Laboratory ID:	08-250-09					
Gasoline Range Organics	280	5.3	NWTPH-Gx	8-24-23	8-25-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: NT-SS-35-6.5-082223						
Laboratory ID:	08-250-10					
Gasoline Range Organics	6.5	5.4	NWTPH-Gx	8-24-23	8-24-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-SS-Dup-1-082223						
Laboratory ID:	08-250-11					
Gasoline	ND	5.1	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: ST-SS-8-8.5-082223						
Laboratory ID:	08-250-12					
Gasoline Range Organics	1300	62	NWTPH-Gx	8-24-23	8-25-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	65-126				
Client ID: ST-SS-7-8.5-082223						
Laboratory ID:	08-250-13					
Gasoline	ND	5.7	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: ST-SS-6-8.5-082223						
Laboratory ID:	08-250-14					
Gasoline	ND	5.6	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				



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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-1-8.5-082223					
Laboratory ID:	08-250-15					
Gasoline	ND	6.7	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID:	ST-SS-2-8.5-082223					
Laboratory ID:	08-250-16					
Gasoline	ND	7.3	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID:	ST-SS-Dup-2-082223					
Laboratory ID:	08-250-17					
Gasoline	ND	6.4	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	65-126				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Gasoline	ND	5.0	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Laboratory ID:	MB0824S2					
Gasoline	ND	5.0	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-250-01										
	ORIG		DUP								
Gasoline	ND	ND	NA	NA	NA		NA	NA	NA	30	
Surrogate:											
Fluorobenzene						81	90	65-126			
Laboratory ID:	08-250-02										
	ORIG		DUP								
Gasoline	ND	ND	NA	NA	NA		NA	NA	NA	30	
Surrogate:											
Fluorobenzene						91	92	65-126			



Date of Report: August 31, 2023
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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
Gasoline	ND	100	NWTPH-Gx	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>70</i>	<i>65-122</i>				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
Gasoline	ND	100	NWTPH-Gx	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	82	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-231-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				83	79	65-122		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID:	08-250-01					
Diesel Range Organics	ND	1500	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	8900	3100	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S

Client ID: NT-piping-SS-25-2.0-082123						
Laboratory ID:	08-250-02					
Diesel Range Organics	39	30	NWTPH-Dx	8-28-23	8-31-23	N
Lube Oil	360	60	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				

Client ID: NT-piping-SS-26-2.0-082123						
Laboratory ID:	08-250-03					
Diesel Range Organics	ND	30	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	120	59	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	56	50-150				

Client ID: NT-SS-29-6.5-082223						
Laboratory ID:	08-250-04					
Diesel Range Organics	ND	29	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	57	NWTPH-Dx	8-28-23	8-30-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	96	50-150				

Client ID: NT-SS-30-6.5-082223						
Laboratory ID:	08-250-05					
Diesel Range Organics	ND	29	NWTPH-Dx	8-28-23	8-29-23	
Lube Oil Range Organics	ND	58	NWTPH-Dx	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				

Client ID: NT-SS-31-6.5-082223						
Laboratory ID:	08-250-06					
Diesel Range Organics	ND	1800	NWTPH-Dx	8-28-23	8-31-23	U1
Lube Oil	32000	2900	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-32-6.5-082223					
Laboratory ID:	08-250-07					
Diesel Range Organics	ND	30	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID:	NT-SS-33-6.5-082223					
Laboratory ID:	08-250-08					
Diesel Range Organics	ND	31	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID:	NT-SS-34-6.5-082223					
Laboratory ID:	08-250-09					
Diesel Fuel #2	8600	150	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	2200	300	NWTPH-Dx	8-28-23	8-31-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Client ID:	NT-SS-35-6.5-082223					
Laboratory ID:	08-250-10					
Diesel Range Organics	ND	240	NWTPH-Dx	8-28-23	8-31-23	U1
Lube Oil	6600	290	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	106	50-150				

Client ID:	NT-SS-Dup-1-082223					
Laboratory ID:	08-250-11					
Diesel Range Organics	ND	730	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	14000	1500	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				

S

Client ID:	ST-SS-8-8.5-082223					
Laboratory ID:	08-250-12					
Diesel Fuel #2	5300	32	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	150	NWTPH-Dx	8-28-23	8-30-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	61	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-7-8.5-082223					
Laboratory ID:	08-250-13					
Diesel Fuel #2	3400	31	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	160	NWTPH-Dx	8-28-23	8-30-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	138	50-150				

Client ID:	ST-SS-6-8.5-082223					
Laboratory ID:	08-250-14					
Diesel Fuel #2	57	31	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil Range Organics	ND	62	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	ST-SS-1-8.5-082223					
Laboratory ID:	08-250-15					
Diesel Range Organics	ND	33	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	67	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Client ID:	ST-SS-2-8.5-082223					
Laboratory ID:	08-250-16					
Diesel Fuel #2	64	33	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	85	66	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	ST-SS-Dup-2-082223					
Laboratory ID:	08-250-17					
Diesel Fuel #2	58	33	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	67	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S3					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-23	8-29-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	107	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	08-250-01									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil	7240	7200	NA	NA		NA	NA	1	40	
Surrogate:										
o-Terphenyl						---	---	50-150		S,S
Laboratory ID:	08-287-03									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil	127	115	NA	NA		NA	NA	10	40	
Surrogate:										
o-Terphenyl						99	103	50-150		



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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0060	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0061	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.0097	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0044	EPA 8260D	8-24-23	8-24-23	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	0.0021	0.00088	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	0.025	0.0018	EPA 8260D	8-24-23	8-24-23	
o-Xylene	0.032	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.053	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.27	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-130				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0065	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0066	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.011	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0048	EPA 8260D	8-24-23	8-24-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	0.0012	0.00096	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	0.013	0.0019	EPA 8260D	8-24-23	8-24-23	
o-Xylene	0.015	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,2,2-Tetrachloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2-Chlorotoluene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
4-Chlorotoluene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0076	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Dichlorodifluoromethane	ND	0.0017	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0068	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0069	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.011	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0050	EPA 8260D	8-24-23	8-24-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-24-23	8-24-23	
o-Xylene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>93</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-130</i>				



Date of Report: August 31, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0370	0.0500	0.0500	75	74	30-160	1	26	
Chloromethane	0.0410	0.0429	0.0500	0.0500	82	86	59-131	5	26	
Vinyl Chloride	0.0440	0.0473	0.0500	0.0500	88	95	68-136	7	23	
Bromomethane	0.0420	0.0476	0.0500	0.0500	84	95	48-155	13	32	
Chloroethane	0.0458	0.0506	0.0500	0.0500	92	101	67-141	10	16	
Trichlorofluoromethane	0.0513	0.0575	0.0500	0.0500	103	115	76-127	11	19	
1,1-Dichloroethene	0.0489	0.0544	0.0500	0.0500	98	109	75-129	11	19	
Iodomethane	0.0328	0.0389	0.0500	0.0500	66	78	37-140	17	27	
Methylene Chloride	0.0467	0.0525	0.0500	0.0500	93	105	60-124	12	18	
(trans) 1,2-Dichloroethene	0.0489	0.0538	0.0500	0.0500	98	108	79-133	10	15	
Methyl t-Butyl Ether	0.0498	0.0526	0.0500	0.0500	100	105	73-125	5	17	
1,1-Dichloroethane	0.0491	0.0541	0.0500	0.0500	98	108	79-125	10	17	
2,2-Dichloropropane	0.0532	0.0532	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0523	0.0574	0.0500	0.0500	105	115	75-131	9	15	
Bromochloromethane	0.0496	0.0552	0.0500	0.0500	99	110	80-126	11	15	
Chloroform	0.0488	0.0525	0.0500	0.0500	98	105	80-123	7	15	
1,1,1-Trichloroethane	0.0466	0.0523	0.0500	0.0500	93	105	78-124	12	21	
Carbon Tetrachloride	0.0419	0.0473	0.0500	0.0500	84	95	74-127	12	18	
1,1-Dichloropropene	0.0445	0.0516	0.0500	0.0500	89	103	80-123	15	15	
Benzene	0.0476	0.0520	0.0500	0.0500	95	104	80-122	9	18	
1,2-Dichloroethane	0.0494	0.0542	0.0500	0.0500	99	108	75-124	9	15	
Trichloroethene	0.0514	0.0521	0.0500	0.0500	103	104	80-129	1	18	
1,2-Dichloropropane	0.0539	0.0540	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0499	0.0483	0.0500	0.0500	100	97	80-123	3	15	
Bromodichloromethane	0.0532	0.0533	0.0500	0.0500	106	107	80-129	0	15	
(cis) 1,3-Dichloropropene	0.0540	0.0541	0.0500	0.0500	108	108	80-130	0	15	
Toluene	0.0505	0.0497	0.0500	0.0500	101	99	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0546	0.0554	0.0500	0.0500	109	111	80-124	1	15	



Date of Report: August 31, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0480	0.0480	0.0500	0.0500	96	96	80-120	0	15	
Tetrachloroethene	0.0540	0.0547	0.0500	0.0500	108	109	77-126	1	15	
1,3-Dichloropropane	0.0529	0.0528	0.0500	0.0500	106	106	77-123	0	15	
Dibromochloromethane	0.0548	0.0528	0.0500	0.0500	110	106	80-128	4	16	
1,2-Dibromoethane	0.0528	0.0514	0.0500	0.0500	106	103	80-122	3	20	
Chlorobenzene	0.0495	0.0509	0.0500	0.0500	99	102	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0504	0.0498	0.0500	0.0500	101	100	80-120	1	15	
Ethylbenzene	0.0510	0.0522	0.0500	0.0500	102	104	80-120	2	15	
m,p-Xylene	0.0990	0.102	0.100	0.100	99	102	80-120	3	15	
o-Xylene	0.0511	0.0525	0.0500	0.0500	102	105	80-120	3	15	
Bromoform	0.0538	0.0538	0.0500	0.0500	108	108	78-126	0	15	
Bromobenzene	0.0494	0.0476	0.0500	0.0500	99	95	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0521	0.0493	0.0500	0.0500	104	99	75-122	6	17	
1,2,3-Trichloropropane	0.0502	0.0473	0.0500	0.0500	100	95	72-125	6	20	
2-Chlorotoluene	0.0523	0.0508	0.0500	0.0500	105	102	75-128	3	15	
4-Chlorotoluene	0.0515	0.0507	0.0500	0.0500	103	101	78-127	2	16	
1,3-Dichlorobenzene	0.0519	0.0514	0.0500	0.0500	104	103	78-123	1	17	
1,4-Dichlorobenzene	0.0520	0.0510	0.0500	0.0500	104	102	77-121	2	17	
1,2-Dichlorobenzene	0.0518	0.0511	0.0500	0.0500	104	102	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0597	0.0523	0.0500	0.0500	119	105	61-137	13	28	
1,2,4-Trichlorobenzene	0.0582	0.0604	0.0500	0.0500	116	121	77-127	4	17	
Hexachlorobutadiene	0.0514	0.0512	0.0500	0.0500	103	102	77-125	0	22	
1,2,3-Trichlorobenzene	0.0527	0.0548	0.0500	0.0500	105	110	77-124	4	19	
Surrogate:										
Dibromofluoromethane					92	102	75-130			
Toluene-d8					100	99	78-128			
4-Bromofluorobenzene					107	107	71-130			



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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0301	0.0288	0.0500	0.0500	60	58	30-160	4	26	
Chloromethane	0.0367	0.0373	0.0500	0.0500	73	75	59-131	2	26	
Vinyl Chloride	0.0401	0.0404	0.0500	0.0500	80	81	68-136	1	23	
Bromomethane	0.0360	0.0379	0.0500	0.0500	72	76	48-155	5	32	
Chloroethane	0.0444	0.0440	0.0500	0.0500	89	88	67-141	1	16	
Trichlorofluoromethane	0.0478	0.0486	0.0500	0.0500	96	97	76-127	2	19	
1,1-Dichloroethene	0.0479	0.0481	0.0500	0.0500	96	96	75-129	0	19	
Iodomethane	0.0229	0.0281	0.0500	0.0500	46	56	37-140	20	27	
Methylene Chloride	0.0515	0.0528	0.0500	0.0500	103	106	60-124	2	18	
(trans) 1,2-Dichloroethene	0.0476	0.0476	0.0500	0.0500	95	95	79-133	0	15	
Methyl t-Butyl Ether	0.0500	0.0493	0.0500	0.0500	100	99	73-125	1	17	
1,1-Dichloroethane	0.0482	0.0490	0.0500	0.0500	96	98	79-125	2	17	
2,2-Dichloropropane	0.0510	0.0533	0.0500	0.0500	102	107	79-126	4	18	
(cis) 1,2-Dichloroethene	0.0514	0.0466	0.0500	0.0500	103	93	75-131	10	15	
Bromochloromethane	0.0522	0.0501	0.0500	0.0500	104	100	80-126	4	15	
Chloroform	0.0472	0.0479	0.0500	0.0500	94	96	80-123	1	15	
1,1,1-Trichloroethane	0.0451	0.0449	0.0500	0.0500	90	90	78-124	0	21	
Carbon Tetrachloride	0.0404	0.0446	0.0500	0.0500	81	89	74-127	10	18	
1,1-Dichloropropene	0.0414	0.0440	0.0500	0.0500	83	88	80-123	6	15	
Benzene	0.0473	0.0468	0.0500	0.0500	95	94	80-122	1	18	
1,2-Dichloroethane	0.0507	0.0505	0.0500	0.0500	101	101	75-124	0	15	
Trichloroethene	0.0506	0.0511	0.0500	0.0500	101	102	80-129	1	18	
1,2-Dichloropropane	0.0526	0.0465	0.0500	0.0500	105	93	80-123	12	15	
Dibromomethane	0.0515	0.0379	0.0500	0.0500	103	76	80-123	30	15	I,L
Bromodichloromethane	0.0529	0.0524	0.0500	0.0500	106	105	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0554	0.0534	0.0500	0.0500	111	107	80-130	4	15	
Toluene	0.0495	0.0496	0.0500	0.0500	99	99	80-120	0	18	
(trans) 1,3-Dichloropropene	0.0567	0.0556	0.0500	0.0500	113	111	80-124	2	15	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0490	0.0489	0.0500	0.0500	98	98	80-120	0	15	
Tetrachloroethene	0.0509	0.0531	0.0500	0.0500	102	106	77-126	4	15	
1,3-Dichloropropane	0.0525	0.0518	0.0500	0.0500	105	104	77-123	1	15	
Dibromochloromethane	0.0522	0.0544	0.0500	0.0500	104	109	80-128	4	16	
1,2-Dibromoethane	0.0515	0.0503	0.0500	0.0500	103	101	80-122	2	20	
Chlorobenzene	0.0489	0.0502	0.0500	0.0500	98	100	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0501	0.0502	0.0500	0.0500	100	100	80-120	0	15	
Ethylbenzene	0.0496	0.0504	0.0500	0.0500	99	101	80-120	2	15	
m,p-Xylene	0.0973	0.0993	0.100	0.100	97	99	80-120	2	15	
o-Xylene	0.0504	0.0508	0.0500	0.0500	101	102	80-120	1	15	
Bromoform	0.0556	0.0546	0.0500	0.0500	111	109	78-126	2	15	
Bromobenzene	0.0488	0.0486	0.0500	0.0500	98	97	79-124	0	15	
1,1,2,2-Tetrachloroethane	0.0533	0.0516	0.0500	0.0500	107	103	75-122	3	17	
1,2,3-Trichloropropane	0.0517	0.0502	0.0500	0.0500	103	100	72-125	3	20	
2-Chlorotoluene	0.0507	0.0520	0.0500	0.0500	101	104	75-128	3	15	
4-Chlorotoluene	0.0510	0.0513	0.0500	0.0500	102	103	78-127	1	16	
1,3-Dichlorobenzene	0.0518	0.0528	0.0500	0.0500	104	106	78-123	2	17	
1,4-Dichlorobenzene	0.0514	0.0507	0.0500	0.0500	103	101	77-121	1	17	
1,2-Dichlorobenzene	0.0508	0.0509	0.0500	0.0500	102	102	80-120	0	15	
1,2-Dibromo-3-chloropropane	0.0589	0.0607	0.0500	0.0500	118	121	61-137	3	28	
1,2,4-Trichlorobenzene	0.0602	0.0599	0.0500	0.0500	120	120	77-127	0	17	
Hexachlorobutadiene	0.0527	0.0514	0.0500	0.0500	105	103	77-125	2	22	
1,2,3-Trichlorobenzene	0.0543	0.0562	0.0500	0.0500	109	112	77-124	3	19	
Surrogate:										
Dibromofluoromethane					94	93	75-130			
Toluene-d8					103	99	78-128			
4-Bromofluorobenzene					110	102	71-130			



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 Project: Jorgensen UST Site Assessment

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
Dichlorodifluoromethane	ND	0.29	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	7.0	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
Dichlorodifluoromethane	ND	0.29	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	7.0	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	



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 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	92	75-127				
<i>Toluene-d8</i>	96	80-127				
<i>4-Bromofluorobenzene</i>	97	78-125				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0823W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	6.83	6.26	10.0	10.0	68	63	34-166	9	21	
Chloromethane	10.2	10.2	10.0	10.0	102	102	63-138	0	18	
Vinyl Chloride	11.3	11.3	10.0	10.0	113	113	71-135	0	20	
Bromomethane	10.4	12.8	10.0	10.0	104	128	20-151	21	36	
Chloroethane	10.6	10.5	10.0	10.0	106	105	76-125	1	20	
Trichlorofluoromethane	9.70	10.2	10.0	10.0	97	102	75-131	5	19	
1,1-Dichloroethene	10.0	10.2	10.0	10.0	100	102	78-125	2	19	
Iodomethane	7.13	8.45	10.0	10.0	71	85	10-155	17	40	
Methylene Chloride	9.50	9.95	10.0	10.0	95	100	80-120	5	15	
(trans) 1,2-Dichloroethene	10.2	10.7	10.0	10.0	102	107	80-125	5	17	
Methyl t-Butyl Ether	10.2	10.5	10.0	10.0	102	105	80-122	3	15	
1,1-Dichloroethane	10.1	10.4	10.0	10.0	101	104	80-125	3	17	
2,2-Dichloropropane	12.4	13.1	10.0	10.0	124	131	80-146	5	21	
(cis) 1,2-Dichloroethene	10.7	11.1	10.0	10.0	107	111	80-129	4	17	
Bromochloromethane	10.4	10.8	10.0	10.0	104	108	80-125	4	18	
Chloroform	10.2	10.4	10.0	10.0	102	104	80-123	2	16	
1,1,1-Trichloroethane	10.3	10.5	10.0	10.0	103	105	80-123	2	18	
Carbon Tetrachloride	10.4	10.5	10.0	10.0	104	105	80-126	1	17	
1,1-Dichloropropene	10.4	10.5	10.0	10.0	104	105	80-126	1	18	
Benzene	10.4	10.6	10.0	10.0	104	106	80-121	2	16	
1,2-Dichloroethane	10.4	10.6	10.0	10.0	104	106	80-124	2	15	
Trichloroethene	10.1	10.2	10.0	10.0	101	102	80-122	1	18	
1,2-Dichloropropane	10.4	10.5	10.0	10.0	104	105	80-123	1	15	
Dibromomethane	10.5	10.5	10.0	10.0	105	105	80-123	0	15	
Bromodichloromethane	11.4	11.5	10.0	10.0	114	115	80-125	1	15	
(cis) 1,3-Dichloropropene	12.0	12.4	10.0	10.0	120	124	80-129	3	15	
Toluene	9.53	9.60	10.0	10.0	95	96	80-120	1	18	
(trans) 1,3-Dichloropropene	11.6	11.6	10.0	10.0	116	116	80-134	0	17	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0823W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	11.0	11.2	10.0	10.0	110	112	77-126	2	20	
Tetrachloroethene	10.1	10.7	10.0	10.0	101	107	80-124	6	18	
1,3-Dichloropropane	11.1	11.2	10.0	10.0	111	112	80-120	1	15	
Dibromochloromethane	10.3	10.4	10.0	10.0	103	104	80-128	1	15	
1,2-Dibromoethane	11.3	11.7	10.0	10.0	113	117	80-127	3	15	
Chlorobenzene	11.1	11.1	10.0	10.0	111	111	80-120	0	17	
1,1,1,2-Tetrachloroethane	11.7	11.9	10.0	10.0	117	119	80-125	2	17	
Ethylbenzene	11.2	11.2	10.0	10.0	112	112	80-125	0	18	
m,p-Xylene	22.2	22.3	20.0	20.0	111	112	80-127	0	18	
o-Xylene	11.0	10.9	10.0	10.0	110	109	80-126	1	18	
Bromoform	12.3	12.5	10.0	10.0	123	125	80-130	2	15	
Bromobenzene	11.4	11.6	10.0	10.0	114	116	76-128	2	16	
1,1,2,2-Tetrachloroethane	12.6	13.1	10.0	10.0	126	131	74-130	4	15	I
1,2,3-Trichloropropane	11.7	10.1	10.0	10.0	117	101	71-129	15	25	
2-Chlorotoluene	11.6	12.2	10.0	10.0	116	122	80-128	5	18	
4-Chlorotoluene	12.3	12.5	10.0	10.0	123	125	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.7	10.0	10.0	116	117	80-126	1	17	
1,4-Dichlorobenzene	11.5	11.7	10.0	10.0	115	117	80-121	2	17	
1,2-Dichlorobenzene	10.8	11.4	10.0	10.0	108	114	79-125	5	15	
1,2-Dibromo-3-chloropropane	10.5	11.2	10.0	10.0	105	112	73-133	6	15	
1,2,4-Trichlorobenzene	12.0	13.0	10.0	10.0	120	130	80-139	8	18	
Hexachlorobutadiene	12.2	12.7	10.0	10.0	122	127	80-151	4	18	
1,2,3-Trichlorobenzene	11.6	12.3	10.0	10.0	116	123	75-146	6	28	
Surrogate:										
Dibromofluoromethane					98	96	75-127			
Toluene-d8					99	98	80-127			
4-Bromofluorobenzene					106	104	78-125			



Date of Report: August 31, 2023
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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID:	08-250-10					
Naphthalene	0.055	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.0098	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	ND	0.0097	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo(j,k)fluoranthene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	8-24-23	8-25-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.0088	EPA 8270E/SIM	8-24-23	8-25-23	U1
Dibenz[a,h]anthracene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	86	39-111				
Pyrene-d10	74	47-114				
Terphenyl-d14	84	44-121				

Client ID: NT-SS-Dup-1-082223						
Laboratory ID:	08-250-11					
Naphthalene	0.058	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	0.036	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.052	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	ND	0.093	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo(j,k)fluoranthene	ND	0.015	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo[a]pyrene	ND	0.10	EPA 8270E/SIM	8-24-23	8-25-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.026	EPA 8270E/SIM	8-24-23	8-25-23	U1
Dibenz[a,h]anthracene	ND	0.015	EPA 8270E/SIM	8-24-23	8-25-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	39-111				
Pyrene-d10	67	47-114				
Terphenyl-d14	76	44-121				



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 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>85</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>91</i>	<i>44-121</i>				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0794	0.0701	0.0833	0.0833	95	84	57-116	12	16	
Acenaphthylene	0.0798	0.0766	0.0833	0.0833	96	92	59-124	4	15	
Acenaphthene	0.0748	0.0706	0.0833	0.0833	90	85	59-124	6	15	
Fluorene	0.0770	0.0713	0.0833	0.0833	92	86	62-122	8	15	
Phenanthrene	0.0747	0.0702	0.0833	0.0833	90	84	62-119	6	15	
Anthracene	0.0761	0.0739	0.0833	0.0833	91	89	64-123	3	15	
Fluoranthene	0.0743	0.0735	0.0833	0.0833	89	88	63-123	1	15	
Pyrene	0.0715	0.0708	0.0833	0.0833	86	85	62-124	1	15	
Benzo[a]anthracene	0.0756	0.0765	0.0833	0.0833	91	92	59-131	1	15	
Chrysene	0.0716	0.0689	0.0833	0.0833	86	83	61-124	4	15	
Benzo[b]fluoranthene	0.0776	0.0767	0.0833	0.0833	93	92	60-126	1	15	
Benzo(j,k)fluoranthene	0.0726	0.0697	0.0833	0.0833	87	84	63-121	4	17	
Benzo[a]pyrene	0.0781	0.0760	0.0833	0.0833	94	91	60-122	3	15	
Indeno(1,2,3-c,d)pyrene	0.0897	0.0883	0.0833	0.0833	108	106	58-127	2	15	
Dibenz[a,h]anthracene	0.0894	0.0865	0.0833	0.0833	107	104	60-124	3	15	
Benzo[g,h,i]perylene	0.0821	0.0789	0.0833	0.0833	99	95	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					88	96	39-111			
Pyrene-d10					81	85	47-114			
Terphenyl-d14					89	92	44-121			



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Aroclor 1016	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.059	EPA 8082A	8-23-23	8-23-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 67 50-127</i>						
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Aroclor 1016	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.059	EPA 8082A	8-23-23	8-23-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 68 50-127</i>						



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 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Aroclor 1016	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-250-10									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.358	0.337	0.500	0.500	ND	72	67	41-121	6	28
Surrogate:										
DCB						76	74	50-127		



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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Arsenic	ND	12	EPA 6010D	8-24-23	8-24-23	
Barium	27	2.9	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.59	EPA 6010D	8-24-23	8-24-23	
Chromium	8.7	0.59	EPA 6010D	8-24-23	8-24-23	
Copper	12	1.2	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.9	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.29	EPA 7471B	8-23-23	8-23-23	
Nickel	8.4	2.9	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	12	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.2	EPA 6010D	8-24-23	8-24-23	
Zinc	25	2.9	EPA 6010D	8-24-23	8-24-23	

Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Arsenic	ND	12	EPA 6010D	8-24-23	8-24-23	
Barium	24	2.9	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.59	EPA 6010D	8-24-23	8-24-23	
Chromium	7.8	0.59	EPA 6010D	8-24-23	8-24-23	
Copper	11	1.2	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.9	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.29	EPA 7471B	8-23-23	8-23-23	
Nickel	7.7	2.9	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	12	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.2	EPA 6010D	8-24-23	8-24-23	
Zinc	22	2.9	EPA 6010D	8-24-23	8-24-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824SM3					
Arsenic	ND	10	EPA 6010D	8-24-23	8-24-23	
Barium	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Chromium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Copper	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.0	EPA 6010D	8-24-23	8-24-23	
Nickel	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	10	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Zinc	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Laboratory ID:	MB0823S1					
Mercury	ND	0.25	EPA 7471B	8-23-23	8-23-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-266-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	44.2	42.8	NA	NA	NA	3	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	20.3	17.5	NA	NA	NA	15	20	
Copper	20.6	19.0	NA	NA	NA	8	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Nickel	25.4	24.0	NA	NA	NA	6	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	28.7	27.5	NA	NA	NA	4	20	

Laboratory ID:	08-218-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-266-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	99.9	99.3	100	100	ND	100	99	75-125	1	20
Barium	147	148	100	100	44.2	103	104	75-125	1	20
Cadmium	47.2	46.9	50.0	50.0	ND	94	94	75-125	1	20
Chromium	119	120	100	100	20.3	98	99	75-125	1	20
Copper	69.5	69.5	50.0	50.0	20.6	98	98	75-125	0	20
Lead	249	248	250	250	ND	100	99	75-125	0	20
Nickel	120	121	100	100	25.4	95	95	75-125	0	20
Selenium	95.9	96.3	100	100	ND	96	96	75-125	0	20
Silver	23.5	22.9	25.0	25.0	ND	94	91	75-125	3	20
Zinc	129	130	100	100	28.7	100	101	75-125	1	20

Laboratory ID:	08-218-01									
Mercury	0.507	0.509	0.500	0.500	0.0124	99	99	80-120	0	20



Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-SS-24-2.0-082123	08-250-01	18	8-28-23
NT-piping-SS-25-2.0-082123	08-250-02	17	8-28-23
NT-piping-SS-26-2.0-082123	08-250-03	16	8-28-23
NT-SS-29-6.5-082223	08-250-04	13	8-28-23
NT-SS-30-6.5-082223	08-250-05	13	8-28-23
NT-SS-31-6.5-082223	08-250-06	13	8-28-23
NT-SS-32-6.5-082223	08-250-07	17	8-28-23
NT-SS-33-6.5-082223	08-250-08	18	8-28-23
NT-SS-34-6.5-082223	08-250-09	16	8-28-23
NT-SS-35-6.5-082223	08-250-10	15	8-23-23
NT-SS-Dup-1-082223	08-250-11	15	8-23-23
ST-SS-8-8.5-082223	08-250-12	21	8-28-23
ST-SS-7-8.5-082223	08-250-13	20	8-28-23
ST-SS-6-8.5-082223	08-250-14	19	8-28-23
ST-SS-1-8.5-082223	08-250-15	25	8-28-23
ST-SS-2-8.5-082223	08-250-16	24	8-28-23
ST-SS-Dup-2-082223	08-250-17	25	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





OnSite Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Turnaround Request (in working days)				Project Manager:		Laboratory No. 08-250															
(Check One)				Requested Analysis																	
☐ Same Day	☐ 1 Day																				
☐ 2 Day	☐ 3 Day																				
☒ Standard 5-day (Hydrocarbon analyses: 5 days, All other analyses: 7 days)																					
☐ (other) _____																					
Company: DH Environmental																					
Project No.: _____																					
Project Name: Jorgensen UST Site Assessment																					
Project Manager: N. Moxley																					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Analysis Results															
1	NT-Piping-SS-24-2.0-082123	8/21/23	1110	Soil	5	NWTPH-HCID	NWTPH-GxBTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Herbicides by 8151A	Total RCRA Metals (8)	Priority Pollutant Metals (13)	TCLP Metals	VPH	EPH	% Moisture
2	NT-Piping-SS-25-2.0-082123		1115																		
3	NT-Piping-SS-26-2.0-082123		1120																		
4	NT-SS-29-6.5-082223	8/22/23	1200																		
5	NT-SS-30-6.5-082223		1150																		
6	NT-SS-31-6.5-082223		1140																		
7	NT-SS-32-6.5-082223		1130																		
8	NT-SS-33-6.5-082223		1120																		
9	NT-SS-34-6.5-082223		1110																		
10	NT-SS-35-6.5-082223		1100																		
11	NT-SS-Dip-1-082223		6900																		
12	ST-SS-8-8.5-082223		1230																		
RELINQUISHED BY: [Signature]		DATE: 8/22/23	RECEIVED BY: [Signature]		DATE: 8/22/23	COMMENTS: nm - please report lowest possible reporting limits - samples may have high petroleum concentrations															
FIRM: DHE		TIME: 1635	FIRM: OSF		TIME: 1635																
RELINQUISHED BY:		DATE:	RECEIVED BY:		DATE:																
FIRM:		TIME:	FIRM:		TIME:																
REVIEWED BY:		DATE REVIEWED:																			



OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Turnaround Request (in working days)				Project Manager:		Laboratory No. 08-250	
(Check One)				Requested Analysis			
☐ Same Day	☐ 1 Day						
☐ 2 Day	☐ 3 Day						
☒ Standard 5-day							
(Hydrocarbon analyses: 5 days, All other analyses: 7 days)							
☐ (other) _____							
Company:	DK Environmental						
Project No.:							
Project Name:	Tompson UT Site Assessment						
Project Manager:	N. Moxley						
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.		
13	ST-SS-7-8.5-082223	8/22/23	1240	Soil	5		
14	ST-SS-6-8.5-082223		1250				
15	ST-SS-1-8.5-082223		1310				
16	ST-SS-2-8.5-082223		1320				
17	ST-SS-Dup-2-082223	8/22/23	0930				
18	Trip Blank	8/22/23	1500	Water	3		
						NWTPH-HCID	
						NWTPH-Gx/BTEX	
						NWTPH-Dx	
						Volatiles by 8200B	
						Halogenated Volatiles by 8200B	
						Semivolatiles by 8270C	
						PAHs by 8270C	
						PCB's by 8082	
						Pesticides by 8081	
						Herbicides by 8151A	
						Total RCRA Metals (8)	
						Priority Pollutant Metals (13)	
						TCLP Metals	
						VPH	
						EPH	
						% Moisture	

RELINQUISHED BY	DATE	RECEIVED BY	DATE	COMMENTS:
<i>[Signature]</i>	8/22/23	Nichelle Eplin	8/22/23	
FIRM	TIME 1635	FIRM	TIME 1635	
RELINQUISHED BY	DATE	RECEIVED BY	DATE	
FIRM	TIME	FIRM	TIME	
REVIEWED BY	DATE	DATE REVIEWED		

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 20, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-250B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a long horizontal stroke.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-250B
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 21 and 22, 2023 and received by the laboratory on August 22, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for 1,1-Dichloropropene and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank and Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

The client requested the analysis of sample NT-piping-SS-24-2.0-082123 after the holding time had expired.

PAHs EPA 8270E/SIM Analysis

Sample NT-SS-31-6.5-082223 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

The client requested the analysis of sample NT-piping-SS-24-2.0-082123 after the holding time had expired.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results

The Matrix Spike/ Matrix Spike Duplicate recoveries for Chromium are outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 99%

Due to the high concentration of Nickel in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 102%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Dichlorodifluoromethane	ND	0.0018	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0090	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0079	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0075	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0058	EPA 8260D	9-5-23	9-5-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0023	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.058	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.29	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>93</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>87</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>90</i>	<i>71-130</i>				



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0063	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0056	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0053	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0041	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.0040	0.0016	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.0044	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.054	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.27	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>85</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>71-130</i>				



Date of Report: September 20, 2023
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Dichlorodifluoromethane	ND	0.077	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.40	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.067	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.35	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.33	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.067	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.51	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.26	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
(trans) 1,3-Dichloropropene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.12	0.10	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.078	0.051	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.26	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>81</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Dichlorodifluoromethane	ND	0.092	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.47	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.079	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.42	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.39	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.079	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.61	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Toluene	0.33	0.31	EPA 8260D	9-5-23	9-5-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		ST-SS-8-8.5-082223				
Laboratory ID:		08-250-12				
(trans) 1,3-Dichloropropene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	0.80	0.061	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	4.6	0.12	EPA 8260D	9-5-23	9-5-23	
o-Xylene	1.9	0.061	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.31	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>84</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0072	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0060	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0047	EPA 8260D	9-5-23	9-5-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.0060	0.0019	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.0036	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0077	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0068	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0050	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



Date of Report: September 20, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0341	0.0327	0.0500	0.0500	68	65	30-160	4	26	
Chloromethane	0.0326	0.0317	0.0500	0.0500	65	63	59-131	3	26	
Vinyl Chloride	0.0371	0.0356	0.0500	0.0500	74	71	68-136	4	23	
Bromomethane	0.0366	0.0366	0.0500	0.0500	73	73	48-155	0	32	
Chloroethane	0.0416	0.0392	0.0500	0.0500	83	78	67-141	6	16	
Trichlorofluoromethane	0.0463	0.0437	0.0500	0.0500	93	87	76-127	6	19	
1,1-Dichloroethene	0.0430	0.0402	0.0500	0.0500	86	80	75-129	7	19	
Iodomethane	0.0424	0.0371	0.0500	0.0500	85	74	37-140	13	27	
Methylene Chloride	0.0388	0.0386	0.0500	0.0500	78	77	60-124	1	18	
(trans) 1,2-Dichloroethene	0.0442	0.0408	0.0500	0.0500	88	82	79-133	8	15	
Methyl t-Butyl Ether	0.0426	0.0398	0.0500	0.0500	85	80	73-125	7	17	
1,1-Dichloroethane	0.0436	0.0412	0.0500	0.0500	87	82	79-125	6	17	
2,2-Dichloropropane	0.0504	0.0465	0.0500	0.0500	101	93	79-126	8	18	
(cis) 1,2-Dichloroethene	0.0407	0.0436	0.0500	0.0500	81	87	75-131	7	15	
Bromochloromethane	0.0456	0.0445	0.0500	0.0500	91	89	80-126	2	15	
Chloroform	0.0436	0.0410	0.0500	0.0500	87	82	80-123	6	15	
1,1,1-Trichloroethane	0.0418	0.0389	0.0500	0.0500	84	78	78-124	7	21	
Carbon Tetrachloride	0.0401	0.0395	0.0500	0.0500	80	79	74-127	2	18	
1,1-Dichloropropene	0.0372	0.0368	0.0500	0.0500	74	74	80-123	1	15	I,I
Benzene	0.0435	0.0408	0.0500	0.0500	87	82	80-122	6	18	
1,2-Dichloroethane	0.0449	0.0413	0.0500	0.0500	90	83	75-124	8	15	
Trichloroethene	0.0514	0.0490	0.0500	0.0500	103	98	80-129	5	18	
1,2-Dichloropropane	0.0491	0.0472	0.0500	0.0500	98	94	80-123	4	15	
Dibromomethane	0.0462	0.0448	0.0500	0.0500	92	90	80-123	3	15	
Bromodichloromethane	0.0503	0.0480	0.0500	0.0500	101	96	80-129	5	15	
(cis) 1,3-Dichloropropene	0.0508	0.0486	0.0500	0.0500	102	97	80-130	4	15	
Toluene	0.0466	0.0449	0.0500	0.0500	93	90	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0568	0.0544	0.0500	0.0500	114	109	80-124	4	15	



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 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0487	0.0467	0.0500	0.0500	97	93	80-120	4	15	
Tetrachloroethene	0.0595	0.0600	0.0500	0.0500	119	120	77-126	1	15	
1,3-Dichloropropane	0.0521	0.0517	0.0500	0.0500	104	103	77-123	1	15	
Dibromochloromethane	0.0555	0.0531	0.0500	0.0500	111	106	80-128	4	16	
1,2-Dibromoethane	0.0536	0.0487	0.0500	0.0500	107	97	80-122	10	20	
Chlorobenzene	0.0534	0.0523	0.0500	0.0500	107	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0497	0.0500	0.0500	105	99	80-120	6	15	
Ethylbenzene	0.0539	0.0532	0.0500	0.0500	108	106	80-120	1	15	
m,p-Xylene	0.107	0.104	0.100	0.100	107	104	80-120	3	15	
o-Xylene	0.0541	0.0531	0.0500	0.0500	108	106	80-120	2	15	
Bromoform	0.0537	0.0517	0.0500	0.0500	107	103	78-126	4	15	
Bromobenzene	0.0548	0.0555	0.0500	0.0500	110	111	79-124	1	15	
1,1,2,2-Tetrachloroethane	0.0536	0.0519	0.0500	0.0500	107	104	75-122	3	17	
1,2,3-Trichloropropane	0.0529	0.0508	0.0500	0.0500	106	102	72-125	4	20	
2-Chlorotoluene	0.0614	0.0596	0.0500	0.0500	123	119	75-128	3	15	
4-Chlorotoluene	0.0590	0.0586	0.0500	0.0500	118	117	78-127	1	16	
1,3-Dichlorobenzene	0.0595	0.0590	0.0500	0.0500	119	118	78-123	1	17	
1,4-Dichlorobenzene	0.0599	0.0587	0.0500	0.0500	120	117	77-121	2	17	
1,2-Dichlorobenzene	0.0569	0.0564	0.0500	0.0500	114	113	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0610	0.0578	0.0500	0.0500	122	116	61-137	5	28	
1,2,4-Trichlorobenzene	0.0659	0.0661	0.0500	0.0500	132	132	77-127	0	17	I,I
Hexachlorobutadiene	0.0582	0.0601	0.0500	0.0500	116	120	77-125	3	22	
1,2,3-Trichlorobenzene	0.0592	0.0607	0.0500	0.0500	118	121	77-124	3	19	
Surrogate:										
Dibromofluoromethane					84	84	75-130			
Toluene-d8					92	94	78-128			
4-Bromofluorobenzene					100	103	71-130			



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 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Naphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	0.038	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[b]fluoranthene	0.056	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	0.062	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno(1,2,3-c,d)pyrene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	65	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	84	44-121				

Client ID: NT-SS-31-6.5-082223

Laboratory ID: 08-250-06						
Naphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	81	39-111				
Pyrene-d10	110	47-114				
Terphenyl-d14	122	44-121				

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 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Naphthalene	0.25	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	0.17	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	11	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	97	39-111				
Pyrene-d10	109	47-114				
Terphenyl-d14	94	44-121				

Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Naphthalene	2.9	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	21	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	17	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	39-111				
Pyrene-d10	100	47-114				
Terphenyl-d14	93	44-121				



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Naphthalene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	0.66	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	1.0	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	102	47-114				
Terphenyl-d14	96	44-121				



Date of Report: September 20, 2023
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 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>90</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>81</i>	<i>44-121</i>				



Date of Report: September 20, 2023
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 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0610	0.0623	0.0833	0.0833	73	75	57-116	2	16	
Acenaphthylene	0.0624	0.0649	0.0833	0.0833	75	78	59-124	4	15	
Acenaphthene	0.0610	0.0630	0.0833	0.0833	73	76	59-124	3	15	
Fluorene	0.0637	0.0664	0.0833	0.0833	76	80	62-122	4	15	
Phenanthrene	0.0650	0.0679	0.0833	0.0833	78	82	62-119	4	15	
Anthracene	0.0696	0.0722	0.0833	0.0833	84	87	64-123	4	15	
Fluoranthene	0.0743	0.0770	0.0833	0.0833	89	92	63-123	4	15	
Pyrene	0.0719	0.0743	0.0833	0.0833	86	89	62-124	3	15	
Benzo[a]anthracene	0.0786	0.0804	0.0833	0.0833	94	97	59-131	2	15	
Chrysene	0.0784	0.0804	0.0833	0.0833	94	97	61-124	3	15	
Benzo[b]fluoranthene	0.0769	0.0832	0.0833	0.0833	92	100	60-126	8	15	
Benzo(j,k)fluoranthene	0.0861	0.0827	0.0833	0.0833	103	99	63-121	4	17	
Benzo[a]pyrene	0.0804	0.0818	0.0833	0.0833	97	98	60-122	2	15	
Indeno(1,2,3-c,d)pyrene	0.0812	0.0832	0.0833	0.0833	97	100	58-127	2	15	
Dibenz[a,h]anthracene	0.0839	0.0855	0.0833	0.0833	101	103	60-124	2	15	
Benzo[g,h,i]perylene	0.0845	0.0865	0.0833	0.0833	101	104	58-124	2	15	
Surrogate:										
2-Fluorobiphenyl					73	74	39-111			
Pyrene-d10					94	96	47-114			
Terphenyl-d14					87	88	44-121			



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Aroclor 1016	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	0.29	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	0.23	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.061	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 81 50-127</i>						
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
Aroclor 1016	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.058	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 53 50-127</i>						
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Aroclor 1016	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.060	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 72 50-127</i>						



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Aroclor 1016	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.063	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 71 50-127</i>						
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Aroclor 1016	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.062	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 76 50-127</i>						



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0906S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.440	0.457	0.500	0.500	N/A	88	91	55-119	4	34
Surrogate:										
DCB						87	92	50-127		



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Arsenic	27	12	EPA 6010D	9-13-23	9-13-23	
Barium	65	3.1	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.61	EPA 6010D	9-13-23	9-13-23	
Chromium	100	0.61	EPA 6010D	9-13-23	9-13-23	
Copper	150	1.2	EPA 6010D	9-14-23	9-15-23	
Lead	140	6.1	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.31	EPA 7471B	9-8-23	9-8-23	
Nickel	910	31	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	190	3.1	EPA 6010D	9-13-23	9-13-23	

Client ID: NT-SS-31-6.5-082223

Laboratory ID: 08-250-06

Arsenic	39	12	EPA 6010D	9-13-23	9-13-23	
Barium	26	2.9	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.58	EPA 6010D	9-13-23	9-13-23	
Chromium	7.2	0.58	EPA 6010D	9-13-23	9-13-23	
Copper	17	1.2	EPA 6010D	9-14-23	9-19-23	
Lead	ND	5.8	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.29	EPA 7471B	9-8-23	9-8-23	
Nickel	12	2.9	EPA 6010D	9-14-23	9-19-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	19	2.9	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Arsenic	ND	12	EPA 6010D	9-13-23	9-13-23	
Barium	24	3.0	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.60	EPA 6010D	9-13-23	9-13-23	
Chromium	7.0	0.60	EPA 6010D	9-13-23	9-13-23	
Copper	11	1.2	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.0	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.30	EPA 7471B	9-8-23	9-8-23	
Nickel	8.1	3.0	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	21	3.0	EPA 6010D	9-13-23	9-13-23	

Client ID: ST-SS-8-8.5-082223

Laboratory ID: 08-250-12

Arsenic	ND	13	EPA 6010D	9-13-23	9-13-23	
Barium	28	3.2	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.63	EPA 6010D	9-13-23	9-13-23	
Chromium	7.9	0.63	EPA 6010D	9-13-23	9-13-23	
Copper	10	1.3	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.3	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.32	EPA 7471B	9-8-23	9-8-23	
Nickel	7.6	3.2	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	13	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.3	EPA 6010D	9-13-23	9-13-23	
Zinc	23	3.2	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Arsenic	ND	12	EPA 6010D	9-13-23	9-13-23	
Barium	23	3.1	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.62	EPA 6010D	9-13-23	9-13-23	
Chromium	7.7	0.62	EPA 6010D	9-13-23	9-13-23	
Copper	8.1	1.2	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.2	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.31	EPA 7471B	9-8-23	9-8-23	
Nickel	6.5	3.1	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	19	3.1	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913SM2					
Arsenic	ND	10	EPA 6010D	9-13-23	9-13-23	
Barium	ND	2.5	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.50	EPA 6010D	9-13-23	9-13-23	
Chromium	ND	0.50	EPA 6010D	9-13-23	9-13-23	
Lead	ND	5.0	EPA 6010D	9-13-23	9-13-23	
Selenium	ND	10	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.0	EPA 6010D	9-13-23	9-13-23	
Zinc	ND	2.5	EPA 6010D	9-13-23	9-13-23	
Laboratory ID:	MB0908S2					
Mercury	ND	0.25	EPA 7471B	9-8-23	9-8-23	
Laboratory ID:	MB0914SM1					
Copper	ND	1.0	EPA 6010D	9-14-23	9-15-23	
Nickel	ND	2.5	EPA 6010D	9-14-23	9-15-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-250-01							
	ORIG	DUP						
Arsenic	22.2	20.0	NA	NA	NA	NA	10	20
Barium	53.4	55.3	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	82.4	51.4	NA	NA	NA	NA	46	20
Lead	117	136	NA	NA	NA	NA	15	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	159	160	NA	NA	NA	NA	1	20

Laboratory ID:	09-037-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-250-01							
	ORIG	DUP						
Copper	124	128	NA	NA	NA	NA	3	20
Nickel	741	761	NA	NA	NA	NA	3	20

MATRIX SPIKES

Laboratory ID:	08-250-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	117	116	100	100	22.2	95	94	75-125	1	20
Barium	155	149	100	100	53.4	102	96	75-125	4	20
Cadmium	45.0	45.4	50.0	50.0	ND	90	91	75-125	1	20
Chromium	150	144	100	100	82.4	67	62	75-125	4	20
Lead	359	352	250	250	117	97	94	75-125	2	20
Selenium	91.4	92.5	100	100	ND	91	93	75-125	1	20
Silver	23.6	23.7	25.0	25.0	ND	94	95	75-125	1	20
Zinc	260	248	100	100	159	101	89	75-125	5	20

Laboratory ID:	09-037-01									
Mercury	0.515	0.524	0.500	0.500	0.0352	96	98	80-120	2	20

Laboratory ID:	08-250-01									
	MS	MSD	MS	MSD		MS	MSD			
Copper	179	166	50.0	50.0	124	111	85	75-125	7	20
Nickel	812	815	100	100	741	71	74	75-125	0	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-250B
Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-SS-24-2.0-082123	08-250-01	18	8-28-23
NT-SS-31-6.5-082223	08-250-06	13	8-28-23
NT-SS-34-6.5-082223	08-250-09	16	8-28-23
ST-SS-8-8.5-082223	08-250-12	21	8-28-23
ST-SS-7-8.5-082223	08-250-13	20	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Chain of Custody

Environmental Inc.

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Phone: (425) 863-3881 • Fax: (425) 865-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. **08-250**

Company:

DH Environmental

Project No.:

Project Name:

Torgensen UST Site Assessment

Project Manager:

N. Moxley

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Day

☐ 3 Day

☒ Standard 5-day
(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

(other)

Lab ID

Sample Identification

Date

Time

Matrix

of

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8) + Cu, Ni, Zn

Priority Pollutant Metals (13)

TCLP Metals

VPH

EPH

% Moisture

Requested Analysis

1 NT-0101-55-24-20-082123 8/21/23 1110 50:1 5

2 NT-0101-55-25-20-082123 8/21/23 1115

3 NT-0101-55-26-20-082123 8/22/23 1120

4 NT-0101-55-27-20-082223 8/22/23 1200

5 NT-0101-55-28-20-082223 8/22/23 1150

6 NT-0101-55-29-20-082223 8/22/23 1140

7 NT-0101-55-30-20-082223 8/22/23 1130

8 NT-0101-55-31-20-082223 8/22/23 1120

9 NT-0101-55-32-20-082223 8/22/23 1110

10 NT-0101-55-33-20-082223 8/22/23 1100

11 NT-0101-55-34-20-082223 8/22/23 6900

12 NT-0101-55-35-20-082223 8/22/23 1230

RELINQUISHED BY

DATE

8/22/23

RECEIVED BY

DATE

8/22/23

TIME

1635

FIRM

DATE

8/22/23

TIME

1635

FIRM

DATE

8/22/23

TIME

1635

FIRM

DATE

TIME

RELINQUISHED BY

DATE

8/22/23

RECEIVED BY

DATE

8/22/23

TIME

1635

FIRM

DATE

8/22/23

TIME

1635

FIRM

DATE

8/22/23

TIME

1635



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Page 2 of 2

Environmental Inc.

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Turnaround Request
(in working days)

Project Manager:

Laboratory No. 08-250

Company: DK Environmental

Project No.: ☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day

(Check One)

☒ Standard 5-day
(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

☐ (other)

Project Name: Torpava UT Site Assessment

Project Manager: N. Moxley

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Herbicides by 8151A	Total RCRA Metals (8)+Cu,Ni,2n	Priority Pollutant Metals (13)	TCLP Metals	VPH	EPH	% Moisture	
13	ST-SS-7-8.5-082223	8/22/23	1240	Soil	5		X	X	X	X		X	X				X					X
14	ST-SS-6-8.5-082223		1250																			
15	ST-SS-1-8.5-082223		1310																			
16	ST-SS-2-8.5-082223		1320																			
17	ST-SS-Dup-2-082223		0930																			
18	Trip Blank	8/22/23	1500	Water	3		X		X	X												

RECEIVED BY: Michelle E. P. in

DATE: 8/22/23

TIME: 1635

RECEIVED BY: BSE

DATE: 8/22/23

TIME: 1435

COMMENTS:

REVIEWED BY: [Signature]

DATE REVIEWED:

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2308-315

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 29, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on August 28, 2023 and received by the laboratory on August 29, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID:	08-315-01					
Gasoline Range Organics	480	5.0	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: NT-SS-18-5.0-082823						
Laboratory ID:	08-315-02					
Gasoline Range Organics	180	5.7	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: NT-SS-19-5.0-082823						
Laboratory ID:	08-315-03					
Gasoline	ND	6.2	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				
Client ID: NT-SS-16-5.0-082823						
Laboratory ID:	08-315-04					
Gasoline	ND	6.0	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-15-5.0-082823						
Laboratory ID:	08-315-05					
Gasoline Range Organics	110	5.1	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829S2					
Gasoline	ND	5.0	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-315-01							
	ORIG	DUP						
GRO	413	372	NA	NA	NA	NA	10	30
Surrogate:								
Fluorobenzene				83	85	65-126		



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
Gasoline	ND	100	NWTPH-Gx	8-30-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	65-122				



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0830W1					
Gasoline	ND	100	NWTPH-Gx	8-30-23	8-30-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-10							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				91	89	65-122		



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-17-5.0-082823					
Laboratory ID:	08-315-01					
Diesel Range Organics	25000	2900	NWTPH-Dx	8-31-23	9-1-23	N
Lube Oil	200000	5900	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				
						S

Client ID:	NT-SS-18-5.0-082823					
Laboratory ID:	08-315-02					
Diesel Range Organics	2500	310	NWTPH-Dx	8-31-23	9-1-23	N
Lube Oil	21000	620	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				
						S

Client ID:	NT-SS-19-5.0-082823					
Laboratory ID:	08-315-03					
Diesel Range Organics	ND	33	NWTPH-Dx	8-31-23	9-1-23	
Lube Oil Range Organics	ND	66	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	NT-SS-16-5.0-082823					
Laboratory ID:	08-315-04					
Diesel Range Organics	ND	30	NWTPH-Dx	8-31-23	8-31-23	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	70	50-150				

Client ID:	NT-SS-15-5.0-082823					
Laboratory ID:	08-315-05					
Diesel Fuel #2	210	30	NWTPH-Dx	8-31-23	8-31-23	N
Lube Oil	910	60	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0831S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-31-23	8-31-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-315-01							
	ORIG	DUP						
Diesel Range Organics	21400	18000	NA	NA	NA	NA	17	40
Lube Oil	172000	141000	NA	NA	NA	NA	20	40
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				---	---	50-150		S,S



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-17-5.0-082823	08-315-01	15	8-31-23
NT-SS-18-5.0-082823	08-315-02	19	8-31-23
NT-SS-19-5.0-082823	08-315-03	24	8-31-23
NT-SS-16-5.0-082823	08-315-04	17	8-31-23
NT-SS-15-5.0-082823	08-315-05	16	8-31-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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September 18, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2308-315B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 29, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 18, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315B
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on August 28, 2023 and received by the laboratory on August 29, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Methylene Chloride, Bromobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank and/or Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Some MTCA Method A cleanup levels are non-achievable for sample NT-SS-17-5.0-082823 due to the necessary dilution of the sample.

The value reported for o-Xylene in sample NT-SS-18-5.0-082823 exceeds the calibration range and is therefore an estimate. The sample was re-analyzed at the lowest possible dilution allowed by Method 5035A with non-detect results for o-Xylene.

Total Metals EPA 6010D/7471B Analysis

The Matrix Spike/ Matrix Spike Duplicate recoveries for Nickel are outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 92%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Dichlorodifluoromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.25	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.25	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
(trans) 1,3-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	0.065	0.050	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	0.26	0.10	EPA 8260D	9-7-23	9-7-23	
o-Xylene	0.28	0.050	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Dichlorodifluoromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.0076	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	0.0030	0.00095	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	0.0037	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.0047	EPA 8260D	9-7-23	9-7-23	



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VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	0.0031	0.00095	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	0.15	0.00095	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	0.12	0.0019	EPA 8260D	9-7-23	9-7-23	
o-Xylene	0.27	0.00095	EPA 8260D	9-7-23	9-7-23	E
Bromoform	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.0080	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.0050	EPA 8260D	9-7-23	9-7-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S2					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-130</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0907S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0403	0.0404	0.0500	0.0500	81	81	30-160	0	26	
Chloromethane	0.0474	0.0475	0.0500	0.0500	95	95	59-131	0	26	
Vinyl Chloride	0.0486	0.0483	0.0500	0.0500	97	97	68-136	1	23	
Bromomethane	0.0506	0.0506	0.0500	0.0500	101	101	48-155	0	32	
Chloroethane	0.0453	0.0466	0.0500	0.0500	91	93	67-141	3	16	
Trichlorofluoromethane	0.0485	0.0493	0.0500	0.0500	97	99	76-127	2	19	
1,1-Dichloroethene	0.0473	0.0471	0.0500	0.0500	95	94	75-129	0	19	
Iodomethane	0.0445	0.0464	0.0500	0.0500	89	93	37-140	4	27	
Methylene Chloride	0.0959	0.0989	0.0500	0.0500	192	198	60-124	3	18	I,I
(trans) 1,2-Dichloroethene	0.0462	0.0472	0.0500	0.0500	92	94	79-133	2	15	
Methyl t-Butyl Ether	0.0444	0.0459	0.0500	0.0500	89	92	73-125	3	17	
1,1-Dichloroethane	0.0460	0.0460	0.0500	0.0500	92	92	79-125	0	17	
2,2-Dichloropropane	0.0457	0.0474	0.0500	0.0500	91	95	79-126	4	18	
(cis) 1,2-Dichloroethene	0.0459	0.0467	0.0500	0.0500	92	93	75-131	2	15	
Bromochloromethane	0.0456	0.0473	0.0500	0.0500	91	95	80-126	4	15	
Chloroform	0.0456	0.0474	0.0500	0.0500	91	95	80-123	4	15	
1,1,1-Trichloroethane	0.0468	0.0478	0.0500	0.0500	94	96	78-124	2	21	
Carbon Tetrachloride	0.0473	0.0495	0.0500	0.0500	95	99	74-127	5	18	
1,1-Dichloropropene	0.0472	0.0493	0.0500	0.0500	94	99	80-123	4	15	
Benzene	0.0466	0.0472	0.0500	0.0500	93	94	80-122	1	18	
1,2-Dichloroethane	0.0439	0.0452	0.0500	0.0500	88	90	75-124	3	15	
Trichloroethene	0.0502	0.0522	0.0500	0.0500	100	104	80-129	4	18	
1,2-Dichloropropane	0.0482	0.0505	0.0500	0.0500	96	101	80-123	5	15	
Dibromomethane	0.0474	0.0529	0.0500	0.0500	95	106	80-123	11	15	
Bromodichloromethane	0.0489	0.0518	0.0500	0.0500	98	104	80-129	6	15	
(cis) 1,3-Dichloropropene	0.0508	0.0537	0.0500	0.0500	102	107	80-130	6	15	
Toluene	0.0461	0.0499	0.0500	0.0500	92	100	80-120	8	18	
(trans) 1,3-Dichloropropene	0.0538	0.0574	0.0500	0.0500	108	115	80-124	6	15	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
SPIKE BLANKS										
Laboratory ID:	SB0907S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0527	0.0571	0.0500	0.0500	105	114	80-120	8	15	
Tetrachloroethene	0.0584	0.0613	0.0500	0.0500	117	123	77-126	5	15	
1,3-Dichloropropane	0.0521	0.0560	0.0500	0.0500	104	112	77-123	7	15	
Dibromochloromethane	0.0552	0.0591	0.0500	0.0500	110	118	80-128	7	16	
1,2-Dibromoethane	0.0532	0.0586	0.0500	0.0500	106	117	80-122	10	20	
Chlorobenzene	0.0538	0.0560	0.0500	0.0500	108	112	80-120	4	18	
1,1,1,2-Tetrachloroethane	0.0536	0.0558	0.0500	0.0500	107	112	80-120	4	15	
Ethylbenzene	0.0554	0.0591	0.0500	0.0500	111	118	80-120	6	15	
m,p-Xylene	0.109	0.114	0.100	0.100	109	114	80-120	4	15	
o-Xylene	0.0542	0.0565	0.0500	0.0500	108	113	80-120	4	15	
Bromoform	0.0523	0.0566	0.0500	0.0500	105	113	78-126	8	15	
Bromobenzene	0.0599	0.0624	0.0500	0.0500	120	125	79-124	4	15	I
1,1,2,2-Tetrachloroethane	0.0552	0.0611	0.0500	0.0500	110	122	75-122	10	17	
1,2,3-Trichloropropane	0.0564	0.0610	0.0500	0.0500	113	122	72-125	8	20	
2-Chlorotoluene	0.0574	0.0609	0.0500	0.0500	115	122	75-128	6	15	
4-Chlorotoluene	0.0595	0.0636	0.0500	0.0500	119	127	78-127	7	16	
1,3-Dichlorobenzene	0.0567	0.0603	0.0500	0.0500	113	121	78-123	6	17	
1,4-Dichlorobenzene	0.0580	0.0608	0.0500	0.0500	116	122	77-121	5	17	I
1,2-Dichlorobenzene	0.0592	0.0611	0.0500	0.0500	118	122	80-120	3	15	I
1,2-Dibromo-3-chloropropane	0.0554	0.0658	0.0500	0.0500	111	132	61-137	17	28	
1,2,4-Trichlorobenzene	0.0620	0.0644	0.0500	0.0500	124	129	77-127	4	17	I
Hexachlorobutadiene	0.0564	0.0562	0.0500	0.0500	113	112	77-125	0	22	
1,2,3-Trichlorobenzene	0.0659	0.0683	0.0500	0.0500	132	137	77-124	4	19	I,I
Surrogate:										
Dibromofluoromethane					92	89	75-130			
Toluene-d8					94	93	78-128			
4-Bromofluorobenzene					100	101	71-130			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	7.5	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	7.5	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0907W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	11.8	11.1	10.0	10.0	118	111	34-166	6	21	
Chloromethane	10.5	10.1	10.0	10.0	105	101	63-138	4	18	
Vinyl Chloride	10.1	9.56	10.0	10.0	101	96	71-135	5	20	
Bromomethane	9.19	10.7	10.0	10.0	92	107	20-151	15	36	
Chloroethane	8.90	8.80	10.0	10.0	89	88	76-125	1	20	
Trichlorofluoromethane	9.33	9.29	10.0	10.0	93	93	75-131	0	19	
1,1-Dichloroethene	9.57	9.40	10.0	10.0	96	94	78-125	2	19	
Iodomethane	6.69	7.28	10.0	10.0	67	73	10-155	8	40	
Methylene Chloride	8.37	8.87	10.0	10.0	84	89	80-120	6	15	
(trans) 1,2-Dichloroethene	9.63	9.41	10.0	10.0	96	94	80-125	2	17	
Methyl t-Butyl Ether	9.73	9.14	10.0	10.0	97	91	80-122	6	15	
1,1-Dichloroethane	9.30	9.15	10.0	10.0	93	92	80-125	2	17	
2,2-Dichloropropane	11.7	11.7	10.0	10.0	117	117	80-146	0	21	
(cis) 1,2-Dichloroethene	9.50	9.48	10.0	10.0	95	95	80-129	0	17	
Bromochloromethane	9.75	9.35	10.0	10.0	98	94	80-125	4	18	
Chloroform	9.44	9.30	10.0	10.0	94	93	80-123	1	16	
1,1,1-Trichloroethane	9.50	9.13	10.0	10.0	95	91	80-123	4	18	
Carbon Tetrachloride	9.66	9.40	10.0	10.0	97	94	80-126	3	17	
1,1-Dichloropropene	9.16	8.91	10.0	10.0	92	89	80-126	3	18	
Benzene	9.35	9.11	10.0	10.0	94	91	80-121	3	16	
1,2-Dichloroethane	9.81	9.23	10.0	10.0	98	92	80-124	6	15	
Trichloroethene	10.2	10.0	10.0	10.0	102	100	80-122	2	18	
1,2-Dichloropropane	10.2	10.1	10.0	10.0	102	101	80-123	1	15	
Dibromomethane	10.5	10.1	10.0	10.0	105	101	80-123	4	15	
Bromodichloromethane	10.9	10.6	10.0	10.0	109	106	80-125	3	15	
(cis) 1,3-Dichloropropene	11.3	11.0	10.0	10.0	113	110	80-129	3	15	
Toluene	9.32	9.24	10.0	10.0	93	92	80-120	1	18	
(trans) 1,3-Dichloropropene	10.4	10.3	10.0	10.0	104	103	80-134	1	17	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0907W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	10.5	10.0	10.0	100	105	77-126	5	20	
Tetrachloroethene	10.7	10.9	10.0	10.0	107	109	80-124	2	18	
1,3-Dichloropropane	9.84	9.91	10.0	10.0	98	99	80-120	1	15	
Dibromochloromethane	10.6	10.9	10.0	10.0	106	109	80-128	3	15	
1,2-Dibromoethane	10.7	10.8	10.0	10.0	107	108	80-127	1	15	
Chlorobenzene	10.1	10.3	10.0	10.0	101	103	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.0	11.2	10.0	10.0	110	112	80-125	2	17	
Ethylbenzene	10.0	10.1	10.0	10.0	100	101	80-125	1	18	
m,p-Xylene	20.0	20.6	20.0	20.0	100	103	80-127	3	18	
o-Xylene	10.2	10.3	10.0	10.0	102	103	80-126	1	18	
Bromoform	11.3	11.5	10.0	10.0	113	115	80-130	2	15	
Bromobenzene	10.1	10.3	10.0	10.0	101	103	76-128	2	16	
1,1,2,2-Tetrachloroethane	10.0	10.4	10.0	10.0	100	104	74-130	4	15	
1,2,3-Trichloropropane	9.46	9.86	10.0	10.0	95	99	71-129	4	25	
2-Chlorotoluene	10.1	10.5	10.0	10.0	101	105	80-128	4	18	
4-Chlorotoluene	10.3	10.6	10.0	10.0	103	106	80-130	3	19	
1,3-Dichlorobenzene	10.0	10.5	10.0	10.0	100	105	80-126	5	17	
1,4-Dichlorobenzene	9.84	10.1	10.0	10.0	98	101	80-121	3	17	
1,2-Dichlorobenzene	9.82	10.1	10.0	10.0	98	101	79-125	3	15	
1,2-Dibromo-3-chloropropane	12.1	11.8	10.0	10.0	121	118	73-133	3	15	
1,2,4-Trichlorobenzene	10.2	10.8	10.0	10.0	102	108	80-139	6	18	
Hexachlorobutadiene	9.40	9.86	10.0	10.0	94	99	80-151	5	18	
1,2,3-Trichlorobenzene	10.6	11.3	10.0	10.0	106	113	75-146	6	28	
Surrogate:										
Dibromofluoromethane					92	90	75-127			
Toluene-d8					98	96	80-127			
4-Bromofluorobenzene					102	102	78-125			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Naphthalene	0.89	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	1.7	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	1.1	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	0.026	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	0.072	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.041	EPA 8270E/SIM	9-8-23	9-8-23	U1
Benzo(j,k)fluoranthene	ND	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.033	EPA 8270E/SIM	9-8-23	9-8-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.031	EPA 8270E/SIM	9-8-23	9-8-23	U1
Dibenz[a,h]anthracene	ND	0.036	EPA 8270E/SIM	9-8-23	9-8-23	U1
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	76	39-111				
Pyrene-d10	92	47-114				
Terphenyl-d14	77	44-121				

Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Naphthalene	0.13	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	0.062	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	0.088	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	0.0028	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	0.0062	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.0045	EPA 8270E/SIM	9-8-23	9-8-23	U1
Benzo(j,k)fluoranthene	ND	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.013	EPA 8270E/SIM	9-8-23	9-8-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.0054	EPA 8270E/SIM	9-8-23	9-8-23	U1
Dibenz[a,h]anthracene	ND	0.0022	EPA 8270E/SIM	9-8-23	9-8-23	U1
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	71	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	71	44-121				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0908S2					
Naphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[j,k]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Dibenz[a,h]anthracene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	81	47-114				
Terphenyl-d14	79	44-121				



Date of Report: September 18, 2023
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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0908S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0624	0.0621	0.0833	0.0833	75	75	57-116	0	16	
Acenaphthylene	0.0671	0.0670	0.0833	0.0833	81	80	59-124	0	15	
Acenaphthene	0.0654	0.0656	0.0833	0.0833	79	79	59-124	0	15	
Fluorene	0.0655	0.0659	0.0833	0.0833	79	79	62-122	1	15	
Phenanthrene	0.0662	0.0662	0.0833	0.0833	79	79	62-119	0	15	
Anthracene	0.0674	0.0677	0.0833	0.0833	81	81	64-123	0	15	
Fluoranthene	0.0692	0.0701	0.0833	0.0833	83	84	63-123	1	15	
Pyrene	0.0672	0.0675	0.0833	0.0833	81	81	62-124	0	15	
Benzo[a]anthracene	0.0705	0.0709	0.0833	0.0833	85	85	59-131	1	15	
Chrysene	0.0701	0.0689	0.0833	0.0833	84	83	61-124	2	15	
Benzo[b]fluoranthene	0.0746	0.0711	0.0833	0.0833	90	85	60-126	5	15	
Benzo(j,k)fluoranthene	0.0712	0.0763	0.0833	0.0833	85	92	63-121	7	17	
Benzo[a]pyrene	0.0713	0.0712	0.0833	0.0833	86	85	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0649	0.0672	0.0833	0.0833	78	81	58-127	3	15	
Dibenz[a,h]anthracene	0.0715	0.0708	0.0833	0.0833	86	85	60-124	1	15	
Benzo[g,h,i]perylene	0.0678	0.0671	0.0833	0.0833	81	81	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					74	74	39-111			
Pyrene-d10					82	83	47-114			
Terphenyl-d14					79	79	44-121			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Aroclor 1016	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	0.16	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	0.11	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.059	EPA 8082A	9-11-23	9-11-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 53 50-127						
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Aroclor 1016	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	0.084	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.062	EPA 8082A	9-11-23	9-11-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 62 50-127						



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0911S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0911S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.404	0.428	0.500	0.500	N/A	81	86	55-119	6	34
Surrogate:										
DCB						81	84	50-127		



Date of Report: September 18, 2023
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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Arsenic	ND	12	EPA 6010D	9-15-23	9-18-23	
Barium	34	2.9	EPA 6010D	9-15-23	9-18-23	
Cadmium	ND	0.59	EPA 6010D	9-15-23	9-18-23	
Chromium	9.3	0.59	EPA 6010D	9-15-23	9-18-23	
Copper	20	1.2	EPA 6010D	9-15-23	9-18-23	
Lead	12	5.9	EPA 6010D	9-15-23	9-18-23	
Mercury	ND	0.29	EPA 7471B	9-14-23	9-14-23	
Nickel	18	2.9	EPA 6010D	9-15-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-15-23	9-18-23	
Silver	ND	1.2	EPA 6010D	9-15-23	9-18-23	
Zinc	59	2.9	EPA 6010D	9-15-23	9-18-23	

Client ID: NT-SS-18-5.0-082823

Laboratory ID: 08-315-02

Arsenic	ND	12	EPA 6010D	9-15-23	9-18-23	
Barium	28	3.1	EPA 6010D	9-15-23	9-18-23	
Cadmium	ND	0.62	EPA 6010D	9-15-23	9-18-23	
Chromium	7.7	0.62	EPA 6010D	9-15-23	9-18-23	
Copper	17	1.2	EPA 6010D	9-15-23	9-18-23	
Lead	ND	6.2	EPA 6010D	9-15-23	9-18-23	
Mercury	ND	0.31	EPA 7471B	9-14-23	9-14-23	
Nickel	9.4	3.1	EPA 6010D	9-15-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-15-23	9-18-23	
Silver	ND	1.2	EPA 6010D	9-15-23	9-18-23	
Zinc	20	3.1	EPA 6010D	9-15-23	9-18-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0915SM1					
Arsenic	ND	10	EPA 6010D	9-15-23	9-15-23	
Barium	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Cadmium	ND	0.50	EPA 6010D	9-15-23	9-15-23	
Chromium	ND	0.50	EPA 6010D	9-15-23	9-15-23	
Copper	ND	1.0	EPA 6010D	9-15-23	9-15-23	
Lead	ND	5.0	EPA 6010D	9-15-23	9-15-23	
Nickel	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Selenium	ND	10	EPA 6010D	9-15-23	9-15-23	
Silver	ND	1.0	EPA 6010D	9-15-23	9-15-23	
Zinc	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Laboratory ID:	MB0914S1					
Mercury	ND	0.25	EPA 7471B	9-14-23	9-14-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-098-01							
	ORIG	DUP						
Arsenic	10.1	13.0	NA	NA	NA	NA	25	20 C
Barium	63.1	55.3	NA	NA	NA	NA	13	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	58.4	57.2	NA	NA	NA	NA	2	20
Copper	21.8	18.9	NA	NA	NA	NA	14	20
Lead	79.2	82.5	NA	NA	NA	NA	4	20
Nickel	283	241	NA	NA	NA	NA	16	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	166	164	NA	NA	NA	NA	2	20

Laboratory ID:	09-034-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-098-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	95.9	96.7	100	100	10.1	86	87	75-125	1	20
Barium	143	141	100	100	63.1	80	78	75-125	1	20
Cadmium	41.0	40.3	50.0	50.0	ND	82	81	75-125	2	20
Chromium	135	133	100	100	58.4	77	75	75-125	1	20
Copper	63.3	66.8	50.0	50.0	21.8	83	90	75-125	5	20
Lead	293	284	250	250	79.2	86	82	75-125	3	20
Nickel	313	314	100	100	283	30	31	75-125	0	20 V
Selenium	82.9	82.6	100	100	ND	83	83	75-125	0	20
Silver	21.8	21.3	25.0	25.0	ND	87	85	75-125	2	20
Zinc	243	269	100	100	166	76	103	75-125	10	20

Laboratory ID:	09-034-01									
Mercury	0.494	0.488	0.500	0.500	0.0158	96	94	80-120	1	20



Date of Report: September 18, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315B
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-17-5.0-082823	08-315-01	15	8-31-23
NT-SS-18-5.0-082823	08-315-02	19	8-31-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: DH Environmental		Turnaround Request (in working days)		Laboratory Number: 08-315	
Project Number:		(Check One)			
Project Name: Star Forge UT Site Assessment		☐ Same Day ☐ 1 Day			
Project Manager: N. Moxley		☐ 2 Days ☐ 3 Days			
Sampled by: N. Moxley		☐ Standard (7 Days)			
Date Sampled: 8/28/23		☒ 5 Days (other)			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	NT-S5-17-5.0-082823	8/28/23	1200	S:1	5
2	NT-S5-18-5.0-082823		1330		
3	NT-S5-19-5.0-082823		1340		
4	NT-S5-16-5.0-082823		1415		
5	NT-S5-15-5.0-082823		1425		
6	Trip Blank			W	3
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 <input 6"="" type="checkbox/>)</td></tr><tr><td colspan="/> NWTPH-Gx					
NWTPH-Dx (SG Clean-up <input 6"="" type="checkbox/>)</td></tr><tr><td colspan="/> Volatiles 8260 * See list					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level) CPAHs + Naphthalenes					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals + Cu, Ni, Zn					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
% Moisture					
Signature		Company		Date	
		DH E		8/28/23 1800	
Relinquished		DH E		8/29/23 0830	
Received		OSE			
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Reviewed/Date		Reviewed/Date		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐	

Comments/Special Instructions

* EDB, EDC, MTBE, BTEX, HVOCS
Added 9/11/23. DB (STA)
Please report to lowest possible limit, but please be advised of potentially elevated petroleum concentrations



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 8, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-357

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 8, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 30, 2023 and received by the laboratory on August 31, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-20-5.0-083023						
Laboratory ID:	08-357-01					
Gasoline	ND	5.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				
Client ID: NT-SS-21-5.0-083023						
Laboratory ID:	08-357-02					
Gasoline	ND	5.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	65-126				
Client ID: NT-SS-22-5.0-083023						
Laboratory ID:	08-357-03					
Gasoline	ND	5.3	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	96	65-126				
Client ID: NT-SS-23-5.0-083023						
Laboratory ID:	08-357-04					
Gasoline	ND	6.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-14-5.0-083023						
Laboratory ID:	08-357-05					
Gasoline Range Organics	450	5.0	NWTPH-Gx	9-1-23	9-1-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				
Client ID: NT-SS-13-5.0-083023						
Laboratory ID:	08-357-06					
Gasoline Range Organics	100	4.3	NWTPH-Gx	9-1-23	9-1-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	65-126				
Client ID: NT-SS-12-5.0-083023						
Laboratory ID:	08-357-07					
Gasoline	ND	5.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-11-5.0-083023						
Laboratory ID:	08-357-08					
Gasoline	ND	7.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-SS-28-6.5-083023						
Laboratory ID:	08-357-09					
Gasoline	ND	5.3	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				
Client ID: NT-SS-27-6.5-083023						
Laboratory ID:	08-357-10					
Gasoline	ND	7.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-26-6.5-083023						
Laboratory ID:	08-357-11					
Gasoline	ND	4.9	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				
Client ID: ST-SS-3-8.5-083023						
Laboratory ID:	08-357-12					
Gasoline	ND	56	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				
Client ID: ST-SS-4-8.5-083023						
Laboratory ID:	08-357-13					
Gasoline	ND	5.8	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	65-126				
Client ID: ST-SS-5-8.5-083023						
Laboratory ID:	08-357-14					
Gasoline	ND	120	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	70	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID:	08-357-15					
Gasoline	ND	280	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	97	65-126				
Client ID: ST-SS-16-6.5-083023						
Laboratory ID:	08-357-16					
Gasoline	ND	230	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: ST-SS-17-6.5-083023						
Laboratory ID:	08-357-17					
Gasoline	ND	170	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	78	65-126				
Client ID: ST-SS-18-6.5-083023						
Laboratory ID:	08-357-18					
Gasoline	ND	78	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: ST-SS-19-6.5-083023						
Laboratory ID:	08-357-19					
Gasoline	ND	4.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: ST-SS-9-6.5-083023						
Laboratory ID:	08-357-20					
Gasoline	ND	5.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	65-126				
Client ID: ST-SS-10-6.5-083023						
Laboratory ID:	08-357-21					
Gasoline	ND	7.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-11-6.5-083023					
Laboratory ID:	08-357-22					
Gasoline	ND	7.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	91	65-126				
Client ID:	ST-SS-12-6.5-083023					
Laboratory ID:	08-357-23					
Gasoline	ND	6.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	85	65-126				
Client ID:	ST-SS-13-6.5-083023					
Laboratory ID:	08-357-24					
Gasoline	ND	8.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	95	65-126				
Client ID:	ST-SS-14-6.5-083023					
Laboratory ID:	08-357-25					
Gasoline	ND	6.8	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	90	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0901S1					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Laboratory ID:	MB0901S2					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Laboratory ID:	MB0901S3					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-357-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				92	98	65-126		
Laboratory ID:	08-357-02							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				94	93	65-126		
Laboratory ID:	08-357-03							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				96	97	65-126		



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
Gasoline	ND	100	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	65-122				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905W1					
Gasoline	ND	100	NWTPH-Gx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-353-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				90	86	65-122		



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-20-5.0-083023					
Laboratory ID:	08-357-01					
Diesel Fuel #2	96	28	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	117	50-150				

Client ID:	NT-SS-21-5.0-083023					
Laboratory ID:	08-357-02					
Diesel Range Organics	ND	30	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	59	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	106	50-150				

Client ID:	NT-SS-22-5.0-083023					
Laboratory ID:	08-357-03					
Diesel Range Organics	ND	30	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	59	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	108	50-150				

Client ID:	NT-SS-23-5.0-083023					
Laboratory ID:	08-357-04					
Diesel Range Organics	ND	33	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	65	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	107	50-150				

Client ID:	NT-SS-14-5.0-083023					
Laboratory ID:	08-357-05					
Diesel Fuel #2	4900	690	NWTPH-Dx	9-1-23	9-6-23	N
Lube Oil	33000	1400	NWTPH-Dx	9-1-23	9-6-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	NT-SS-13-5.0-083023					
Laboratory ID:	08-357-06					
Diesel Fuel #2	4900	1300	NWTPH-Dx	9-1-23	9-6-23	N
Lube Oil	47000	2700	NWTPH-Dx	9-1-23	9-6-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-12-5.0-083023					
Laboratory ID:	08-357-07					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID: NT-SS-11-5.0-083023

Laboratory ID:	08-357-08					
Diesel Range Organics	ND	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	69	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	107	50-150				

Client ID: NT-SS-28-6.5-083023

Laboratory ID:	08-357-09					
Diesel Range Organics	ND	29	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	58	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID: NT-SS-27-6.5-083023

Laboratory ID:	08-357-10					
Diesel Range Organics	ND	32	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil	120	63	NWTPH-Dx	9-1-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	125	50-150				

Client ID: NT-SS-26-6.5-083023

Laboratory ID:	08-357-11					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	130	50-150				

Client ID: ST-SS-3-8.5-083023

Laboratory ID:	08-357-12					
Diesel Fuel #2	330	32	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	64	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-4-8.5-083023					
Laboratory ID:	08-357-13					
Diesel Fuel #2	130	31	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	62	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	114	50-150				

Client ID:	ST-SS-5-8.5-083023					
Laboratory ID:	08-357-14					
Diesel Fuel #2	430	29	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	57	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	124	50-150				

Client ID:	ST-SS-15-6.5-083023					
Laboratory ID:	08-357-15					
Diesel Fuel #2	15000	130	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	740	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	146	50-150				

Client ID:	ST-SS-16-6.5-083023					
Laboratory ID:	08-357-16					
Diesel Fuel #2	6000	130	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	710	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	134	50-150				

Client ID:	ST-SS-17-6.5-083023					
Laboratory ID:	08-357-17					
Diesel Fuel #2	18000	270	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	1100	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S

Client ID:	ST-SS-18-6.5-083023					
Laboratory ID:	08-357-18					
Diesel Fuel #2	2900	27	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	190	NWTPH-Dx	9-1-23	9-2-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	140	50-150				



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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-19-6.5-083023					
Laboratory ID:	08-357-19					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	ST-SS- 9-6.5-083023					
Laboratory ID:	08-357-20					
Diesel Range Organics	ND	33	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	66	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	ST-SS-10-6.5-083023					
Laboratory ID:	08-357-21					
Diesel Range Organics	ND	36	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	73	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	ST-SS-11-6.5-083023					
Laboratory ID:	08-357-22					
Diesel Range Organics	38	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	70	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

Client ID:	ST-SS-12-6.5-083023					
Laboratory ID:	08-357-23					
Diesel Range Organics	ND	32	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	63	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

Client ID:	ST-SS-13-6.5-083023					
Laboratory ID:	08-357-24					
Diesel Range Organics	ND	40	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	80	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-14-6.5-083023					
Laboratory ID:	08-357-25					
Diesel Range Organics	ND	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	69	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0901S2					
Diesel Range Organics	ND	25	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	98	50-150				
Laboratory ID:	MB0901S3					
Diesel Range Organics	ND	25	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	08-357-01									
	ORIG	DUP								
Diesel Fuel #2	84.6	59.5	NA	NA		NA	NA	35	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						117	101	50-150		
Laboratory ID:	08-357-02									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						106	108	50-150		
Laboratory ID:	08-357-21									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						58	87	50-150		



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-20-5.0-083023	08-357-01	11	9-5-23
NT-SS-21-5.0-083023	08-357-02	15	9-5-23
NT-SS-22-5.0-083023	08-357-03	16	9-5-23
NT-SS-23-5.0-083023	08-357-04	24	9-5-23
NT-SS-14-5.0-083023	08-357-05	9	9-5-23
NT-SS-13-5.0-083023	08-357-06	7	9-5-23
NT-SS-12-5.0-083023	08-357-07	10	9-5-23
NT-SS-11-5.0-083023	08-357-08	28	9-5-23
NT-SS-28-6.5-083023	08-357-09	13	9-5-23
NT-SS-27-6.5-083023	08-357-10	21	9-5-23
NT-SS-26-6.5-083023	08-357-11	10	9-5-23
ST-SS-3-8.5-083023	08-357-12	22	9-5-23
ST-SS-4-8.5-083023	08-357-13	19	9-5-23
ST-SS-5-8.5-083023	08-357-14	12	9-5-23
ST-SS-15-6.5-083023	08-357-15	6	9-5-23
ST-SS-16-6.5-083023	08-357-16	6	9-5-23
ST-SS-17-6.5-083023	08-357-17	6	9-5-23
ST-SS-18-6.5-083023	08-357-18	6	9-5-23
ST-SS-19-6.5-083023	08-357-19	11	9-5-23
ST-SS- 9-6.5-083023	08-357-20	24	9-5-23
ST-SS-10-6.5-083023	08-357-21	31	9-5-23
ST-SS-11-6.5-083023	08-357-22	28	9-5-23
ST-SS-12-6.5-083023	08-357-23	21	9-5-23
ST-SS-13-6.5-083023	08-357-24	37	9-5-23
ST-SS-14-6.5-083023	08-357-25	27	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Chain of Custody

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Chain of Custody

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Company: OnSite Environmental		Turnaround Request (in working days)		Laboratory Number: 08-357																	
Project Number:		(Check One)																			
Project Name: Tanpensen UST Site Assessment		☐ Same Day ☐ 1 Day																			
Project Manager: N. Moxley		☐ 2 Days ☐ 3 Days																			
Sampled by: N. Moxley		☒ 5-day (other)																			
Lab ID		Date Sampled		Time Sampled		Matrix		Number of Containers													
11	NT-SS-26-6.5-083023	8/30/23	0930	Soil	5																
12	ST-SS-3-8.5-083023		1220																		
13	ST-SS-4-8.5-083023		1225																		
14	ST-SS-5-8.5-083023		1235																		
15	ST-SS-15-6.5-083023		1250																		
16	ST-SS-16-6.5-083023		1300																		
17	ST-SS-17-6.5-083023		1310																		
18	ST-SS-18-6.5-083023		1320																		
19	ST-SS-19-6.5-083023		1330																		
20	ST-SS-9-6.5-083023		1210																		
Signature		Company		Date		Time		Comments/Special Instructions													
Relinquished		DITE		8-31-23		1214															
Received		OSF		8/31/23		1214															
Relinquished																					
Received																					
Relinquished																					
Received																					
Relinquished																					
Received																					
Relinquished																					
Reviewed/Date		Reviewed/Date						Data Package: Standard ☒ Level III ☐ Level IV ☐ Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐													



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September 22, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-357B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 22, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357B
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 30, 2023 and received by the laboratory on August 31, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

Some MTCA Method A cleanup levels are not achievable for samples ST-SS-15-6.5-083023 and ST-SS-17-6.5-083023 due to the necessary dilution of these samples.

PAHs EPA 8270E/SIM Analysis

Sample ST-SS-15-6.5-083023 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

PCBs EPA 8082A Analysis

Sample matrix effects caused the percent recovery for the surrogate DCB in the sample NT-SS-13-5.0-083023 (49%) to be below the quality control limits of 50-127%. All other QC associated with this sample batch was within limits. No further action was undertaken.

Total Metals EPA 6010D/7471B Analysis

The Matrix Spike/ Matrix Spike Duplicate recoveries for Chromium and Nickel are outside control limits due to matrix inhomogeneity. The Spike Blank recovery was 108% for Chromium and 111% for Nickel.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	9-13-23	9-13-23	
Chloromethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Vinyl Chloride	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromomethane	ND	0.0058	EPA 8260D	9-13-23	9-13-23	
Chloroethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Trichlorofluoromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Iodomethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Methylene Chloride	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
2,2-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromochloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Chloroform	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Carbon Tetrachloride	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Benzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Trichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Dibromomethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromodichloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Toluene	ND	0.0046	EPA 8260D	9-13-23	9-13-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,2-Trichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Tetrachloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,3-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Dibromochloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromoethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Chlorobenzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Ethylbenzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
m,p-Xylene	0.0094	0.0018	EPA 8260D	9-13-23	9-13-23	
o-Xylene	0.0069	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromoform	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Bromobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.043	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.21	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>76</i>	<i>71-130</i>				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Dichlorodifluoromethane	ND	0.060	EPA 8260D	9-12-23	9-13-23	
Chloromethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Vinyl Chloride	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromomethane	ND	0.27	EPA 8260D	9-12-23	9-13-23	
Chloroethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Trichlorofluoromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Iodomethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Methylene Chloride	ND	0.21	EPA 8260D	9-12-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Methyl t-Butyl Ether	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2,2-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromochloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Chloroform	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,1-Trichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Carbon Tetrachloride	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Benzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Trichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Dibromomethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromodichloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.21	EPA 8260D	9-12-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Toluene	ND	0.21	EPA 8260D	9-12-23	9-13-23	



Date of Report: September 22, 2023
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
(trans) 1,3-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,2-Trichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Tetrachloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,3-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Dibromochloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromoethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Chlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Ethylbenzene	0.085	0.043	EPA 8260D	9-12-23	9-13-23	
m,p-Xylene	0.48	0.085	EPA 8260D	9-12-23	9-13-23	
o-Xylene	0.25	0.043	EPA 8260D	9-12-23	9-13-23	
Bromoform	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Bromobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
4-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,3-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,4-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Hexachlorobutadiene	ND	0.21	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>71-130</i>				



Date of Report: September 22, 2023
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 Project: Jorgensen UST Site Assessment

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Dichlorodifluoromethane	ND	0.061	EPA 8260D	9-12-23	9-13-23	
Chloromethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Vinyl Chloride	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromomethane	ND	0.28	EPA 8260D	9-12-23	9-13-23	
Chloroethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Trichlorofluoromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Iodomethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Methylene Chloride	ND	0.22	EPA 8260D	9-12-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Methyl t-Butyl Ether	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2,2-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromochloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Chloroform	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,1-Trichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Carbon Tetrachloride	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Benzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Trichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Dibromomethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromodichloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.22	EPA 8260D	9-12-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Toluene	ND	0.22	EPA 8260D	9-12-23	9-13-23	



Date of Report: September 22, 2023
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
(trans) 1,3-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,2-Trichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Tetrachloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,3-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Dibromochloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromoethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Chlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Ethylbenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
m,p-Xylene	ND	0.087	EPA 8260D	9-12-23	9-13-23	
o-Xylene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromoform	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Bromobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2-Chlorotoluene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
4-Chlorotoluene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,3-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,4-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Hexachlorobutadiene	ND	0.22	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.011	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0050	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



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 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-13-23	9-13-23	
Chloromethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromomethane	ND	0.0063	EPA 8260D	9-13-23	9-13-23	
Chloroethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Iodomethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Chloroform	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Benzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Toluene	ND	0.0050	EPA 8260D	9-13-23	9-13-23	



Date of Report: September 22, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-13-23	9-13-23	
o-Xylene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromoform	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>71-130</i>				



Date of Report: September 22, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0426	0.0385	0.0500	0.0500	85	77	30-160	10	26	
Chloromethane	0.0460	0.0428	0.0500	0.0500	92	86	59-131	7	26	
Vinyl Chloride	0.0492	0.0468	0.0500	0.0500	98	94	68-136	5	23	
Bromomethane	0.0486	0.0456	0.0500	0.0500	97	91	48-155	6	32	
Chloroethane	0.0511	0.0482	0.0500	0.0500	102	96	67-141	6	16	
Trichlorofluoromethane	0.0507	0.0481	0.0500	0.0500	101	96	76-127	5	19	
1,1-Dichloroethene	0.0545	0.0501	0.0500	0.0500	109	100	75-129	8	19	
Iodomethane	0.0411	0.0417	0.0500	0.0500	82	83	37-140	1	27	
Methylene Chloride	0.0462	0.0446	0.0500	0.0500	92	89	60-124	4	18	
(trans) 1,2-Dichloroethene	0.0513	0.0496	0.0500	0.0500	103	99	79-133	3	15	
Methyl t-Butyl Ether	0.0504	0.0488	0.0500	0.0500	101	98	73-125	3	17	
1,1-Dichloroethane	0.0515	0.0497	0.0500	0.0500	103	99	79-125	4	17	
2,2-Dichloropropane	0.0531	0.0529	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0538	0.0518	0.0500	0.0500	108	104	75-131	4	15	
Bromochloromethane	0.0499	0.0491	0.0500	0.0500	100	98	80-126	2	15	
Chloroform	0.0530	0.0513	0.0500	0.0500	106	103	80-123	3	15	
1,1,1-Trichloroethane	0.0523	0.0506	0.0500	0.0500	105	101	78-124	3	21	
Carbon Tetrachloride	0.0520	0.0484	0.0500	0.0500	104	97	74-127	7	18	
1,1-Dichloropropene	0.0520	0.0483	0.0500	0.0500	104	97	80-123	7	15	
Benzene	0.0517	0.0501	0.0500	0.0500	103	100	80-122	3	18	
1,2-Dichloroethane	0.0518	0.0510	0.0500	0.0500	104	102	75-124	2	15	
Trichloroethene	0.0570	0.0529	0.0500	0.0500	114	106	80-129	7	18	
1,2-Dichloropropane	0.0538	0.0538	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0532	0.0529	0.0500	0.0500	106	106	80-123	1	15	
Bromodichloromethane	0.0561	0.0546	0.0500	0.0500	112	109	80-129	3	15	
(cis) 1,3-Dichloropropene	0.0577	0.0564	0.0500	0.0500	115	113	80-130	2	15	
Toluene	0.0532	0.0511	0.0500	0.0500	106	102	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0573	0.0564	0.0500	0.0500	115	113	80-124	2	15	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0528	0.0520	0.0500	0.0500	106	104	80-120	2	15	
Tetrachloroethene	0.0587	0.0556	0.0500	0.0500	117	111	77-126	5	15	
1,3-Dichloropropane	0.0535	0.0522	0.0500	0.0500	107	104	77-123	2	15	
Dibromochloromethane	0.0577	0.0567	0.0500	0.0500	115	113	80-128	2	16	
1,2-Dibromoethane	0.0534	0.0531	0.0500	0.0500	107	106	80-122	1	20	
Chlorobenzene	0.0569	0.0548	0.0500	0.0500	114	110	80-120	4	18	
1,1,1,2-Tetrachloroethane	0.0582	0.0554	0.0500	0.0500	116	111	80-120	5	15	
Ethylbenzene	0.0555	0.0531	0.0500	0.0500	111	106	80-120	4	15	
m,p-Xylene	0.116	0.111	0.100	0.100	116	111	80-120	4	15	
o-Xylene	0.0562	0.0546	0.0500	0.0500	112	109	80-120	3	15	
Bromoform	0.0561	0.0554	0.0500	0.0500	112	111	78-126	1	15	
Bromobenzene	0.0559	0.0535	0.0500	0.0500	112	107	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0528	0.0529	0.0500	0.0500	106	106	75-122	0	17	
1,2,3-Trichloropropane	0.0504	0.0508	0.0500	0.0500	101	102	72-125	1	20	
2-Chlorotoluene	0.0589	0.0570	0.0500	0.0500	118	114	75-128	3	15	
4-Chlorotoluene	0.0582	0.0558	0.0500	0.0500	116	112	78-127	4	16	
1,3-Dichlorobenzene	0.0581	0.0559	0.0500	0.0500	116	112	78-123	4	17	
1,4-Dichlorobenzene	0.0592	0.0563	0.0500	0.0500	118	113	77-121	5	17	
1,2-Dichlorobenzene	0.0562	0.0542	0.0500	0.0500	112	108	80-120	4	15	
1,2-Dibromo-3-chloropropane	0.0521	0.0520	0.0500	0.0500	104	104	61-137	0	28	
1,2,4-Trichlorobenzene	0.0606	0.0576	0.0500	0.0500	121	115	77-127	5	17	
Hexachlorobutadiene	0.0596	0.0562	0.0500	0.0500	119	112	77-125	6	22	
1,2,3-Trichlorobenzene	0.0598	0.0572	0.0500	0.0500	120	114	77-124	4	19	
Surrogate:										
Dibromofluoromethane					95	92	75-130			
Toluene-d8					98	99	78-128			
4-Bromofluorobenzene					99	99	71-130			



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent	Recovery	RPD		Flags
					Recovery	Limits			
SPIKE BLANKS									
Laboratory ID:	SB0913S1								
	SB	SBD	SB	SBD	SB	SBD			
Dichlorodifluoromethane	0.0357	0.0328	0.0500	0.0500	71	66	30-160	8	26
Chloromethane	0.0403	0.0370	0.0500	0.0500	81	74	59-131	9	26
Vinyl Chloride	0.0450	0.0430	0.0500	0.0500	90	86	68-136	5	23
Bromomethane	0.0395	0.0407	0.0500	0.0500	79	81	48-155	3	32
Chloroethane	0.0472	0.0427	0.0500	0.0500	94	85	67-141	10	16
Trichlorofluoromethane	0.0472	0.0454	0.0500	0.0500	94	91	76-127	4	19
1,1-Dichloroethene	0.0496	0.0485	0.0500	0.0500	99	97	75-129	2	19
Iodomethane	0.0442	0.0422	0.0500	0.0500	88	84	37-140	5	27
Methylene Chloride	0.0439	0.0452	0.0500	0.0500	88	90	60-124	3	18
(trans) 1,2-Dichloroethene	0.0487	0.0473	0.0500	0.0500	97	95	79-133	3	15
Methyl t-Butyl Ether	0.0512	0.0507	0.0500	0.0500	102	101	73-125	1	17
1,1-Dichloroethane	0.0506	0.0483	0.0500	0.0500	101	97	79-125	5	17
2,2-Dichloropropane	0.0510	0.0493	0.0500	0.0500	102	99	79-126	3	18
(cis) 1,2-Dichloroethene	0.0509	0.0488	0.0500	0.0500	102	98	75-131	4	15
Bromochloromethane	0.0510	0.0507	0.0500	0.0500	102	101	80-126	1	15
Chloroform	0.0497	0.0505	0.0500	0.0500	99	101	80-123	2	15
1,1,1-Trichloroethane	0.0505	0.0490	0.0500	0.0500	101	98	78-124	3	21
Carbon Tetrachloride	0.0496	0.0482	0.0500	0.0500	99	96	74-127	3	18
1,1-Dichloropropene	0.0487	0.0477	0.0500	0.0500	97	95	80-123	2	15
Benzene	0.0494	0.0489	0.0500	0.0500	99	98	80-122	1	18
1,2-Dichloroethane	0.0522	0.0525	0.0500	0.0500	104	105	75-124	1	15
Trichloroethene	0.0521	0.0535	0.0500	0.0500	104	107	80-129	3	18
1,2-Dichloropropane	0.0538	0.0526	0.0500	0.0500	108	105	80-123	2	15
Dibromomethane	0.0556	0.0566	0.0500	0.0500	111	113	80-123	2	15
Bromodichloromethane	0.0558	0.0540	0.0500	0.0500	112	108	80-129	3	15
(cis) 1,3-Dichloropropene	0.0584	0.0570	0.0500	0.0500	117	114	80-130	2	15
Toluene	0.0525	0.0507	0.0500	0.0500	105	101	80-120	3	18
(trans) 1,3-Dichloropropene	0.0575	0.0572	0.0500	0.0500	115	114	80-124	1	15



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QUALITY CONTROL

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0913S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0542	0.0540	0.0500	0.0500	108	108	80-120	0	15	
Tetrachloroethene	0.0547	0.0531	0.0500	0.0500	109	106	77-126	3	15	
1,3-Dichloropropane	0.0549	0.0537	0.0500	0.0500	110	107	77-123	2	15	
Dibromochloromethane	0.0583	0.0588	0.0500	0.0500	117	118	80-128	1	16	
1,2-Dibromoethane	0.0566	0.0562	0.0500	0.0500	113	112	80-122	1	20	
Chlorobenzene	0.0552	0.0536	0.0500	0.0500	110	107	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0575	0.0555	0.0500	0.0500	115	111	80-120	4	15	
Ethylbenzene	0.0533	0.0522	0.0500	0.0500	107	104	80-120	2	15	
m,p-Xylene	0.112	0.108	0.100	0.100	112	108	80-120	4	15	
o-Xylene	0.0553	0.0533	0.0500	0.0500	111	107	80-120	4	15	
Bromoform	0.0609	0.0607	0.0500	0.0500	122	121	78-126	0	15	
Bromobenzene	0.0526	0.0525	0.0500	0.0500	105	105	79-124	0	15	
1,1,2,2-Tetrachloroethane	0.0555	0.0561	0.0500	0.0500	111	112	75-122	1	17	
1,2,3-Trichloropropane	0.0540	0.0558	0.0500	0.0500	108	112	72-125	3	20	
2-Chlorotoluene	0.0556	0.0528	0.0500	0.0500	111	106	75-128	5	15	
4-Chlorotoluene	0.0541	0.0526	0.0500	0.0500	108	105	78-127	3	16	
1,3-Dichlorobenzene	0.0549	0.0546	0.0500	0.0500	110	109	78-123	1	17	
1,4-Dichlorobenzene	0.0554	0.0550	0.0500	0.0500	111	110	77-121	1	17	
1,2-Dichlorobenzene	0.0548	0.0550	0.0500	0.0500	110	110	80-120	0	15	
1,2-Dibromo-3-chloropropane	0.0580	0.0634	0.0500	0.0500	116	127	61-137	9	28	
1,2,4-Trichlorobenzene	0.0565	0.0572	0.0500	0.0500	113	114	77-127	1	17	
Hexachlorobutadiene	0.0570	0.0550	0.0500	0.0500	114	110	77-125	4	22	
1,2,3-Trichlorobenzene	0.0580	0.0584	0.0500	0.0500	116	117	77-124	1	19	
Surrogate:										
Dibromofluoromethane					92	95	75-130			
Toluene-d8					100	97	78-128			
4-Bromofluorobenzene					102	104	71-130			



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VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	1.4	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	9.6	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>81</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				



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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	1.4	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	9.6	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	81	75-127				
Toluene-d8	91	80-127				
4-Bromofluorobenzene	100	78-125				



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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent	Recovery		RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0912W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	8.42	7.07	10.0	10.0	84	71	34-166	17	21	
Chloromethane	9.40	8.82	10.0	10.0	94	88	63-138	6	18	
Vinyl Chloride	9.79	9.16	10.0	10.0	98	92	71-135	7	20	
Bromomethane	7.36	8.87	10.0	10.0	74	89	20-151	19	36	
Chloroethane	9.56	9.51	10.0	10.0	96	95	76-125	1	20	
Trichlorofluoromethane	9.07	8.84	10.0	10.0	91	88	75-131	3	19	
1,1-Dichloroethene	9.61	9.42	10.0	10.0	96	94	78-125	2	19	
Iodomethane	5.23	6.91	10.0	10.0	52	69	10-155	28	40	
Methylene Chloride	8.70	8.64	10.0	10.0	87	86	80-120	1	15	
(trans) 1,2-Dichloroethene	9.68	9.76	10.0	10.0	97	98	80-125	1	17	
Methyl t-Butyl Ether	8.85	9.03	10.0	10.0	89	90	80-122	2	15	
1,1-Dichloroethane	9.69	9.57	10.0	10.0	97	96	80-125	1	17	
2,2-Dichloropropane	10.9	10.9	10.0	10.0	109	109	80-146	0	21	
(cis) 1,2-Dichloroethene	9.79	9.89	10.0	10.0	98	99	80-129	1	17	
Bromochloromethane	9.60	9.61	10.0	10.0	96	96	80-125	0	18	
Chloroform	9.60	9.57	10.0	10.0	96	96	80-123	0	16	
1,1,1-Trichloroethane	9.23	9.18	10.0	10.0	92	92	80-123	1	18	
Carbon Tetrachloride	9.45	9.48	10.0	10.0	95	95	80-126	0	17	
1,1-Dichloropropene	8.93	9.29	10.0	10.0	89	93	80-126	4	18	
Benzene	9.59	9.38	10.0	10.0	96	94	80-121	2	16	
1,2-Dichloroethane	9.86	9.90	10.0	10.0	99	99	80-124	0	15	
Trichloroethene	9.88	9.71	10.0	10.0	99	97	80-122	2	18	
1,2-Dichloropropane	10.3	10.0	10.0	10.0	103	100	80-123	3	15	
Dibromomethane	10.0	9.66	10.0	10.0	100	97	80-123	3	15	
Bromodichloromethane	10.6	10.4	10.0	10.0	106	104	80-125	2	15	
(cis) 1,3-Dichloropropene	11.0	10.8	10.0	10.0	110	108	80-129	2	15	
Toluene	9.45	8.92	10.0	10.0	95	89	80-120	6	18	
(trans) 1,3-Dichloropropene	9.36	9.74	10.0	10.0	94	97	80-134	4	17	



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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.63	9.92	10.0	10.0	96	99	77-126	3	20	
Tetrachloroethene	10.4	10.3	10.0	10.0	104	103	80-124	1	18	
1,3-Dichloropropane	9.40	9.71	10.0	10.0	94	97	80-120	3	15	
Dibromochloromethane	10.4	10.4	10.0	10.0	104	104	80-128	0	15	
1,2-Dibromoethane	9.83	10.2	10.0	10.0	98	102	80-127	4	15	
Chlorobenzene	9.82	9.64	10.0	10.0	98	96	80-120	2	17	
1,1,1,2-Tetrachloroethane	10.5	10.5	10.0	10.0	105	105	80-125	0	17	
Ethylbenzene	9.71	9.89	10.0	10.0	97	99	80-125	2	18	
m,p-Xylene	19.6	19.5	20.0	20.0	98	98	80-127	1	18	
o-Xylene	9.93	9.74	10.0	10.0	99	97	80-126	2	18	
Bromoform	10.6	10.6	10.0	10.0	106	106	80-130	0	15	
Bromobenzene	9.63	9.53	10.0	10.0	96	95	76-128	1	16	
1,1,2,2-Tetrachloroethane	9.81	9.78	10.0	10.0	98	98	74-130	0	15	
1,2,3-Trichloropropane	9.61	9.21	10.0	10.0	96	92	71-129	4	25	
2-Chlorotoluene	10.2	9.78	10.0	10.0	102	98	80-128	4	18	
4-Chlorotoluene	10.0	9.55	10.0	10.0	100	96	80-130	5	19	
1,3-Dichlorobenzene	9.79	9.57	10.0	10.0	98	96	80-126	2	17	
1,4-Dichlorobenzene	9.55	9.25	10.0	10.0	96	93	80-121	3	17	
1,2-Dichlorobenzene	9.65	9.31	10.0	10.0	97	93	79-125	4	15	
1,2-Dibromo-3-chloropropane	10.2	10.4	10.0	10.0	102	104	73-133	2	15	
1,2,4-Trichlorobenzene	9.51	9.76	10.0	10.0	95	98	80-139	3	18	
Hexachlorobutadiene	8.51	8.67	10.0	10.0	85	87	80-151	2	18	
1,2,3-Trichlorobenzene	10.1	10.2	10.0	10.0	101	102	75-146	1	28	
Surrogate:										
Dibromofluoromethane					85	83	75-127			
Toluene-d8					91	91	80-127			
4-Bromofluorobenzene					104	102	78-125			



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Naphthalene	0.14	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	0.46	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	0.87	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	0.13	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.15	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	0.097	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.14	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	0.080	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	88	39-111				
Pyrene-d10	108	47-114				
Terphenyl-d14	106	44-121				

Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Naphthalene	0.58	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	27	0.71	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	37	0.71	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.16	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.042	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	95	39-111				
Pyrene-d10	124	47-114				
Terphenyl-d14	102	44-121				

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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Naphthalene	0.17	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	7.3	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	15	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	0.13	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.38	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	0.046	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.074	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>88</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>95</i>	<i>44-121</i>				



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 Laboratory Reference: 2308-357B
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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[a]anthracene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Chrysene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[b]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo(j,k)fluoranthene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[a]pyrene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Dibenz[a,h]anthracene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	83	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	99	44-121				



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 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0913S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0738	0.0726	0.0833	0.0833	89	87	57-116	2	16	
Acenaphthylene	0.0806	0.0811	0.0833	0.0833	97	97	59-124	1	15	
Acenaphthene	0.0735	0.0765	0.0833	0.0833	88	92	59-124	4	15	
Fluorene	0.0771	0.0804	0.0833	0.0833	93	97	62-122	4	15	
Phenanthrene	0.0699	0.0711	0.0833	0.0833	84	85	62-119	2	15	
Anthracene	0.0833	0.0924	0.0833	0.0833	100	111	64-123	10	15	
Fluoranthene	0.0770	0.0826	0.0833	0.0833	92	99	63-123	7	15	
Pyrene	0.0766	0.0808	0.0833	0.0833	92	97	62-124	5	15	
Benzo[a]anthracene	0.0695	0.0737	0.0833	0.0833	83	88	59-131	6	15	
Chrysene	0.0804	0.0842	0.0833	0.0833	97	101	61-124	5	15	
Benzo[b]fluoranthene	0.0772	0.0783	0.0833	0.0833	93	94	60-126	1	15	
Benzo(j,k)fluoranthene	0.0846	0.0930	0.0833	0.0833	102	112	63-121	9	17	
Benzo[a]pyrene	0.0828	0.0867	0.0833	0.0833	99	104	60-122	5	15	
Indeno(1,2,3-c,d)pyrene	0.0707	0.0668	0.0833	0.0833	85	80	58-127	6	15	
Dibenz[a,h]anthracene	0.0791	0.0832	0.0833	0.0833	95	100	60-124	5	15	
Benzo[g,h,i]perylene	0.0701	0.0738	0.0833	0.0833	84	89	58-124	5	15	
Surrogate:										
2-Fluorobiphenyl					88	88	39-111			
Pyrene-d10					96	99	47-114			
Terphenyl-d14					99	101	44-121			



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Aroclor 1016	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1221	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1232	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1242	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1248	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1254	0.13	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1260	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1262	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1268	0.068	0.054	EPA 8082A	9-15-23	9-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	49	50-127				Q
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Aroclor 1016	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.053	EPA 8082A	9-15-23	9-16-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	69	50-127				
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Aroclor 1016	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.053	EPA 8082A	9-15-23	9-16-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	77	50-127				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0915S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	93	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	09-141-16									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.800	0.773	0.500	0.500	0.436	73	67	41-121	3	28
Surrogate:										
DCB						75	70	50-127		



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	27	2.7	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.54	EPA 6010D	9-20-23	9-20-23	
Chromium	7.9	0.54	EPA 6010D	9-20-23	9-20-23	
Copper	21	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.4	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.27	EPA 7471B	9-14-23	9-14-23	
Nickel	11	2.7	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	23	2.7	EPA 6010D	9-20-23	9-20-23	

Client ID: ST-SS-15-6.5-083023

Laboratory ID: 08-357-15

Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	21	2.6	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.53	EPA 6010D	9-20-23	9-20-23	
Chromium	7.1	0.53	EPA 6010D	9-20-23	9-20-23	
Copper	7.8	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	11	5.3	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.26	EPA 7471B	9-14-23	9-14-23	
Nickel	7.5	2.6	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	20	2.6	EPA 6010D	9-20-23	9-20-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	25	2.7	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.53	EPA 6010D	9-20-23	9-20-23	
Chromium	8.3	0.53	EPA 6010D	9-20-23	9-20-23	
Copper	8.1	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.3	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.27	EPA 7471B	9-14-23	9-14-23	
Nickel	8.0	2.7	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	22	2.7	EPA 6010D	9-20-23	9-20-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0920SM2					
Arsenic	ND	10	EPA 6010D	9-20-23	9-20-23	
Barium	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.50	EPA 6010D	9-20-23	9-20-23	
Chromium	ND	0.50	EPA 6010D	9-20-23	9-20-23	
Copper	ND	1.0	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.0	EPA 6010D	9-20-23	9-20-23	
Nickel	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	10	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.0	EPA 6010D	9-20-23	9-20-23	
Zinc	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Laboratory ID:	MB0914S1					
Mercury	ND	0.25	EPA 7471B	9-14-23	9-14-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-187-15							
	ORIG	DUP						
Arsenic	24.2	24.3	NA	NA	NA	NA	1	20
Barium	68.9	73.0	NA	NA	NA	NA	6	20
Cadmium	0.580	ND	NA	NA	NA	NA	NA	20
Chromium	52.4	80.1	NA	NA	NA	NA	42	20
Copper	11.4	12.2	NA	NA	NA	NA	7	20
Lead	32.1	28.7	NA	NA	NA	NA	11	20
Nickel	266	348	NA	NA	NA	NA	27	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	96.0	105	NA	NA	NA	NA	9	20

Laboratory ID:	09-034-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-187-15									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	123	122	100	100	24.2	99	98	75-125	0	20
Barium	170	170	100	100	68.9	101	101	75-125	0	20
Cadmium	45.0	44.6	50.0	50.0	0.580	89	88	75-125	1	20
Chromium	161	151	100	100	52.4	109	98	75-125	7	20
Copper	61.4	59.9	50.0	50.0	11.4	100	97	75-125	2	20
Lead	284	282	250	250	32.1	101	100	75-125	1	20
Nickel	399	342	100	100	266	132	76	75-125	15	20
Selenium	94.2	93.6	100	100	ND	94	94	75-125	1	20
Silver	24.7	23.9	25.0	25.0	ND	99	96	75-125	3	20
Zinc	186	176	100	100	96.0	90	80	75-125	6	20

Laboratory ID:	09-034-01									
Mercury	0.494	0.488	0.500	0.500	0.0158	96	94	80-120	1	20



Date of Report: September 22, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357B
Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-13-5.0-083023	08-357-06	7	9-5-23
ST-SS-15-6.5-083023	08-357-15	6	9-5-23
ST-SS-17-6.5-083023	08-357-17	6	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Onsite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 3

Company: DH Environmental		Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)		Laboratory Number: 08-357															
Project Name: Torresen UST Site Assessment		☒ 5-day (other)																	
Project Manager: N. Moxley																			
Sampled by: N. Moxley																			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers														
1	NT-SS-20-5.0-083023	8/30/23	1015	Soil	5	NWTPH-HCID													
2	NT-SS-21-5.0-083023		1025			NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)													
3	NT-SS-22-5.0-083023		1030			NWTPH-Gx													
4	NT-SS-23-5.0-083023		1040			NWTPH-Dx (SG Clean-up ☐)													
5	NT-SS-14-5.0-083023		1005			Volatiles 8260 *													
6	NT-SS-13-5.0-083023		1000			Halogenated Volatiles 8260													
7	NT-SS-12-5.0-083023		0955			EDB EPA 8011 (Waters Only)													
8	NT-SS-11-5.0-083023		1045			Semivolatiles 8270/SIM (with low-level PAHs)													
9	NT-SS-28-6.5-083023		0945			PAHs 8270/SIM (low-level)													
10	NT-SS-27-6.5-083023		0935			CPAHs + Naphthalenes													
					PCBs 8082														
					Organochlorine Pesticides 8081														
					Organophosphorus Pesticides 8270/SIM														
					Chlorinated Acid Herbicides 8151														
					Total RCRA Metals														
					Total MTCA Metals														
					TCLP Metals														
					HEM (oil and grease) 1664														
					%														
					Moisture														
Signature: <i>N. Moxley</i>		Company: DHE		Date: 8-31-23		Time: 1210		Comments/Special Instructions											
Received		Received		Received		Received		- please report lowest possible reporting limits											
Relinquished		Relinquished		Relinquished		Relinquished		- samples may have elevated petroleum concentrations											
Received		Received		Received		Received		*- EDB, EDC, MTBE, BTEX, hVACs											
Received		Received		Received		Received		X Added 9/12/23. DB (STA)											
Reviewed/Date		Reviewed/Date		Reviewed/Date		Reviewed/Date		Data Package: Standard ☒ Level III ☐ Level IV ☐											
								Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐											



Chain of Custody

Page 2 of 3

Environmental Inc.

Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.on-site-env.com

Laboratory Number: 08-357

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ 5-day
(other)

Company: DH Environmental
Project Name: Damperen UST Site Assessment
Project Manager: N. Moxley
Sampled by: N. Moxley

Lab ID Sample Identification

11	N/T-S5-26-6.5-083023
12	ST-S5-3-8.5-083023
13	ST-S5-4-8.5-083023
14	ST-S5-5-8.5-083023
15	ST-S5-15-6.5-083023
16	ST-S5-16-6.5-083023
17	ST-S5-17-6.5-083023
18	ST-S5-18-6.5-083023
19	ST-S5-19-6.5-083023
20	ST-S5-9-6.5-083023

Signature

Company

Date

Time

Comments/Special Instructions

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)	
NWTPH-Gx	X
NWTPH-Dx (SG Clean-up ☐)	X
Volatiles 8260 *	
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs) PAHs 8270/SIM (low-level) CPAHs + Naphthalenes PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals + Cu, Ni, Zn	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	

% Moisture

Relinquished
Received
Relinquished
Received
Relinquished
Received

Matt Moxley
Michael R. Smith

DHE

OSE

8-31-23

8/31/23

1214

1214

Data Package: Standard X Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Reviewed/Date

Reviewed/Date

Reviewed/Date



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Chain of Custody

Page 3 of 3

Company: DH Environmental		Turnaround Request (In working days)		Laboratory Number: 08-357									
Project Name: Tonguesen UST Site Assessment		(Check One)											
Project Manager: N. Moxley		☐ Same Day ☐ 1 Day											
Sampled by: N. Moxley		☐ 2 Days ☐ 3 Days											
Date Sampled: 8/30/23		☒ 5-day (other)											
Time Sampled: 12:05		Standard (7 Days)											
Matrix: Soil													
Number of Containers													
NWTPH-HCID													
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)													
NWTPH-Gx													
NWTPH-Dx (SG Clean-up ☐)													
Volatiles 8260 *													
Halogenated Volatiles 8260													
EDB EPA 8011 (Waters Only)													
Semivolatiles 8270/SIM (with low-level PAHs)													
PAHs 8270/SIM (low-level) cPAHs + Naphthalenes													
PCBs 8082													
Organochlorine Pesticides 8081													
Organophosphorus Pesticides 8270/SIM													
Chlorinated Acid Herbicides 8151													
Total RCRA Metals + Cu, Ni, Zn													
Total MTCA Metals													
TCLP Metals													
HEM (oil and grease) 1664													
% Moisture													



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 17, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2310-177

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 13, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', followed by a long horizontal line.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on October 13, 2023 and received by the laboratory on October 13, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Chloroethane, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Gasoline Range Organics	220	7.8	NWTPH-Gx	10-16-23	10-16-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Gasoline	ND	4.8	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Gasoline	ND	4.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Gasoline	ND	5.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-177-03							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				93	90	65-126		



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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-122				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	74	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-160-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				75	73	65-122		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Diesel Fuel #2	3400	140	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	860	290	NWTPH-Dx	10-16-23	10-16-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	129	50-150				

Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Diesel Range Organics	120	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	260	56	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				

Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Diesel Range Organics	ND	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	190	55	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Diesel Range Organics	ND	25	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	78	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-177-01									
	ORIG	DUP								
Diesel Fuel #2	2970	2830	NA	NA		NA	NA	5	40	
Lube Oil	759	801	NA	NA		NA	NA	5	40	
Surrogate:										
o-Terphenyl						129	121	50-150		



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Dichlorodifluoromethane	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Toluene	0.40	0.18	EPA 8260D	10-16-23	10-16-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 17, 2023
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
(trans) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	0.46	0.037	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	2.1	0.073	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.87	0.037	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0041	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0016	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.0012	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0015	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-130</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	



Date of Report: October 17, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0020	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	96	71-130				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0382	0.0378	0.0500	0.0500	76	76	30-160	1	26	
Chloromethane	0.0437	0.0437	0.0500	0.0500	87	87	59-131	0	26	
Vinyl Chloride	0.0387	0.0382	0.0500	0.0500	77	76	68-136	1	23	
Bromomethane	0.0439	0.0437	0.0500	0.0500	88	87	48-155	0	32	
Chloroethane	0.0471	0.0468	0.0500	0.0500	94	94	67-141	1	16	
Trichlorofluoromethane	0.0490	0.0484	0.0500	0.0500	98	97	76-127	1	19	
1,1-Dichloroethene	0.0469	0.0478	0.0500	0.0500	94	96	75-129	2	19	
Iodomethane	0.0454	0.0433	0.0500	0.0500	91	87	37-140	5	27	
Methylene Chloride	0.0470	0.0482	0.0500	0.0500	94	96	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0475	0.0481	0.0500	0.0500	95	96	79-133	1	15	
Methyl t-Butyl Ether	0.0520	0.0531	0.0500	0.0500	104	106	73-125	2	17	
1,1-Dichloroethane	0.0472	0.0473	0.0500	0.0500	94	95	79-125	0	17	
2,2-Dichloropropane	0.0478	0.0492	0.0500	0.0500	96	98	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0469	0.0473	0.0500	0.0500	94	95	75-131	1	15	
Bromochloromethane	0.0509	0.0521	0.0500	0.0500	102	104	80-126	2	15	
Chloroform	0.0474	0.0480	0.0500	0.0500	95	96	80-123	1	15	
1,1,1-Trichloroethane	0.0472	0.0478	0.0500	0.0500	94	96	78-124	1	21	
Carbon Tetrachloride	0.0480	0.0481	0.0500	0.0500	96	96	74-127	0	18	
1,1-Dichloropropene	0.0470	0.0480	0.0500	0.0500	94	96	80-123	2	15	
Benzene	0.0462	0.0459	0.0500	0.0500	92	92	80-122	1	18	
1,2-Dichloroethane	0.0502	0.0515	0.0500	0.0500	100	103	75-124	3	15	
Trichloroethene	0.0470	0.0473	0.0500	0.0500	94	95	80-129	1	18	
1,2-Dichloropropane	0.0481	0.0489	0.0500	0.0500	96	98	80-123	2	15	
Dibromomethane	0.0494	0.0512	0.0500	0.0500	99	102	80-123	4	15	
Bromodichloromethane	0.0495	0.0491	0.0500	0.0500	99	98	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0515	0.0521	0.0500	0.0500	103	104	80-130	1	15	
Toluene	0.0441	0.0446	0.0500	0.0500	88	89	80-120	1	18	
(trans) 1,3-Dichloropropene	0.0561	0.0567	0.0500	0.0500	112	113	80-124	1	15	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0539	0.0576	0.0500	0.0500	108	115	80-120	7	15	
Tetrachloroethene	0.0515	0.0520	0.0500	0.0500	103	104	77-126	1	15	
1,3-Dichloropropane	0.0530	0.0554	0.0500	0.0500	106	111	77-123	4	15	
Dibromochloromethane	0.0549	0.0565	0.0500	0.0500	110	113	80-128	3	16	
1,2-Dibromoethane	0.0551	0.0570	0.0500	0.0500	110	114	80-122	3	20	
Chlorobenzene	0.0513	0.0523	0.0500	0.0500	103	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0521	0.0533	0.0500	0.0500	104	107	80-120	2	15	
Ethylbenzene	0.0504	0.0511	0.0500	0.0500	101	102	80-120	1	15	
m,p-Xylene	0.105	0.105	0.100	0.100	105	105	80-120	0	15	
o-Xylene	0.0519	0.0520	0.0500	0.0500	104	104	80-120	0	15	
Bromoform	0.0553	0.0584	0.0500	0.0500	111	117	78-126	5	15	
Bromobenzene	0.0525	0.0538	0.0500	0.0500	105	108	79-124	2	15	
1,1,2,2-Tetrachloroethane	0.0535	0.0563	0.0500	0.0500	107	113	75-122	5	17	
1,2,3-Trichloropropane	0.0560	0.0589	0.0500	0.0500	112	118	72-125	5	20	
2-Chlorotoluene	0.0525	0.0526	0.0500	0.0500	105	105	75-128	0	15	
4-Chlorotoluene	0.0556	0.0577	0.0500	0.0500	111	115	78-127	4	16	
1,3-Dichlorobenzene	0.0526	0.0538	0.0500	0.0500	105	108	78-123	2	17	
1,4-Dichlorobenzene	0.0547	0.0548	0.0500	0.0500	109	110	77-121	0	17	
1,2-Dichlorobenzene	0.0562	0.0569	0.0500	0.0500	112	114	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0569	0.0647	0.0500	0.0500	114	129	61-137	13	28	
1,2,4-Trichlorobenzene	0.0543	0.0530	0.0500	0.0500	109	106	77-127	2	17	
Hexachlorobutadiene	0.0456	0.0463	0.0500	0.0500	91	93	77-125	2	22	
1,2,3-Trichlorobenzene	0.0584	0.0593	0.0500	0.0500	117	119	77-124	2	19	
Surrogate:										
Dibromofluoromethane					98	97	75-130			
Toluene-d8					95	95	78-128			
4-Bromofluorobenzene					106	108	71-130			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>78-125</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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**VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD		Flags
					Recovery		Limits		RPD	Limit	
SPIKE BLANKS											
Laboratory ID:	SB1016W1										
	SB	SBD	SB	SBD	SB	SBD					
Dichlorodifluoromethane	11.4	9.59	10.0	10.0	114	96	34-166	17	21		
Chloromethane	7.69	6.63	10.0	10.0	77	66	63-138	15	18		
Vinyl Chloride	9.12	8.03	10.0	10.0	91	80	71-135	13	20		
Bromomethane	11.4	10.1	10.0	10.0	114	101	20-151	12	36		
Chloroethane	8.59	7.29	10.0	10.0	86	73	76-125	16	20	I	
Trichlorofluoromethane	10.3	9.42	10.0	10.0	103	94	75-131	9	19		
1,1-Dichloroethene	10.1	9.00	10.0	10.0	101	90	78-125	12	19		
Iodomethane	13.3	12.1	10.0	10.0	133	121	10-155	9	40		
Methylene Chloride	9.44	8.62	10.0	10.0	94	86	80-120	9	15		
(trans) 1,2-Dichloroethene	9.52	8.82	10.0	10.0	95	88	80-125	8	17		
Methyl t-Butyl Ether	10.1	9.23	10.0	10.0	101	92	80-122	9	15		
1,1-Dichloroethane	9.61	8.69	10.0	10.0	96	87	80-125	10	17		
2,2-Dichloropropane	11.5	10.9	10.0	10.0	115	109	80-146	5	21		
(cis) 1,2-Dichloroethene	10.0	9.32	10.0	10.0	100	93	80-129	7	17		
Bromochloromethane	9.81	9.31	10.0	10.0	98	93	80-125	5	18		
Chloroform	9.93	9.12	10.0	10.0	99	91	80-123	9	16		
1,1,1-Trichloroethane	10.1	9.13	10.0	10.0	101	91	80-123	10	18		
Carbon Tetrachloride	10.4	9.59	10.0	10.0	104	96	80-126	8	17		
1,1-Dichloropropene	10.0	9.31	10.0	10.0	100	93	80-126	7	18		
Benzene	9.37	8.53	10.0	10.0	94	85	80-121	9	16		
1,2-Dichloroethane	11.1	10.3	10.0	10.0	111	103	80-124	7	15		
Trichloroethene	10.5	9.54	10.0	10.0	105	95	80-122	10	18		
1,2-Dichloropropane	9.46	8.85	10.0	10.0	95	89	80-123	7	15		
Dibromomethane	10.4	9.64	10.0	10.0	104	96	80-123	8	15		
Bromodichloromethane	10.8	9.70	10.0	10.0	108	97	80-125	11	15		
(cis) 1,3-Dichloropropene	10.6	9.81	10.0	10.0	106	98	80-129	8	15		
Toluene	9.63	9.18	10.0	10.0	96	92	80-120	5	18		
(trans) 1,3-Dichloropropene	11.9	11.1	10.0	10.0	119	111	80-134	7	17		



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Analyte	Result	Spike Level	Percent		Recovery		RPD	Limit	Flags	
			Recovery	Limits						
SPIKE BLANKS										
Laboratory ID:	SB1016W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	9.87	10.0	10.0	100	99	77-126	1	20	
Tetrachloroethene	11.5	11.0	10.0	10.0	115	110	80-124	4	18	
1,3-Dichloropropane	10.5	10.1	10.0	10.0	105	101	80-120	4	15	
Dibromochloromethane	11.5	10.6	10.0	10.0	115	106	80-128	8	15	
1,2-Dibromoethane	11.6	10.6	10.0	10.0	116	106	80-127	9	15	
Chlorobenzene	11.2	11.0	10.0	10.0	112	110	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.2	10.9	10.0	10.0	112	109	80-125	3	17	
Ethylbenzene	11.0	10.6	10.0	10.0	110	106	80-125	4	18	
m,p-Xylene	22.3	21.7	20.0	20.0	112	109	80-127	3	18	
o-Xylene	10.9	10.7	10.0	10.0	109	107	80-126	2	18	
Bromoform	12.6	12.0	10.0	10.0	126	120	80-130	5	15	
Bromobenzene	11.1	10.5	10.0	10.0	111	105	76-128	6	16	
1,1,2,2-Tetrachloroethane	10.3	10.3	10.0	10.0	103	103	74-130	0	15	
1,2,3-Trichloropropane	9.95	9.79	10.0	10.0	100	98	71-129	2	25	
2-Chlorotoluene	11.2	11.4	10.0	10.0	112	114	80-128	2	18	
4-Chlorotoluene	11.4	11.2	10.0	10.0	114	112	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.4	10.0	10.0	116	114	80-126	2	17	
1,4-Dichlorobenzene	11.3	11.3	10.0	10.0	113	113	80-121	0	17	
1,2-Dichlorobenzene	11.4	11.3	10.0	10.0	114	113	79-125	1	15	
1,2-Dibromo-3-chloropropane	11.7	11.4	10.0	10.0	117	114	73-133	3	15	
1,2,4-Trichlorobenzene	13.6	14.5	10.0	10.0	136	145	80-139	6	18	I
Hexachlorobutadiene	12.8	13.1	10.0	10.0	128	131	80-151	2	18	
1,2,3-Trichlorobenzene	13.9	15.1	10.0	10.0	139	151	75-146	8	28	I
Surrogate:										
Dibromofluoromethane					104	102	75-127			
Toluene-d8					111	109	80-127			
4-Bromofluorobenzene					100	103	78-125			



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Naphthalene	2.1	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	6.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
1-Methylnaphthalene	4.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
Benzo[a]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.071	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.045	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.034	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	69	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	76	44-121				

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Naphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.11	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.18	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.056	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.16	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.031	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Naphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.57	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.59	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.68	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.23	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.63	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.37	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.088	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	87	47-114				
Terphenyl-d14	92	44-121				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>80</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>44-121</i>				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0700	0.0664	0.0833	0.0833	84	80	57-116	5	16	
Acenaphthylene	0.0796	0.0743	0.0833	0.0833	96	89	59-124	7	15	
Acenaphthene	0.0749	0.0709	0.0833	0.0833	90	85	59-124	5	15	
Fluorene	0.0739	0.0752	0.0833	0.0833	89	90	62-122	2	15	
Phenanthrene	0.0685	0.0776	0.0833	0.0833	82	93	62-119	12	15	
Anthracene	0.0749	0.0863	0.0833	0.0833	90	104	64-123	14	15	
Fluoranthene	0.0757	0.0820	0.0833	0.0833	91	98	63-123	8	15	
Pyrene	0.0772	0.0822	0.0833	0.0833	93	99	62-124	6	15	
Benzo[a]anthracene	0.0756	0.0754	0.0833	0.0833	91	91	59-131	0	15	
Chrysene	0.0784	0.0790	0.0833	0.0833	94	95	61-124	1	15	
Benzo[b]fluoranthene	0.0783	0.0764	0.0833	0.0833	94	92	60-126	2	15	
Benzo(j,k)fluoranthene	0.0827	0.0847	0.0833	0.0833	99	102	63-121	2	17	
Benzo[a]pyrene	0.0783	0.0785	0.0833	0.0833	94	94	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0760	0.0777	0.0833	0.0833	91	93	58-127	2	15	
Dibenz[a,h]anthracene	0.0833	0.0849	0.0833	0.0833	100	102	60-124	2	15	
Benzo[g,h,i]perylene	0.0808	0.0817	0.0833	0.0833	97	98	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					80	76	39-111			
Pyrene-d10					83	88	47-114			
Terphenyl-d14					92	92	44-121			



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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Aroclor 1016	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				



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 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1016S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.428	0.432	0.500	0.500	N/A	86	86	55-119	1	34	
Surrogate:											
DCB						92	91	50-127			



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Arsenic	31	11	EPA 6010D	10-13-23	10-13-23	
Barium	82	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	0.85	0.57	EPA 6010D	10-13-23	10-13-23	
Chromium	25	0.57	EPA 6010D	10-13-23	10-13-23	
Copper	67	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	49	5.7	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	94	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	280	2.8	EPA 6010D	10-13-23	10-13-23	

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	41	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	55	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	56	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	64	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	44	2.8	EPA 6010D	10-13-23	10-13-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	33	2.7	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	20	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	30	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.27	EPA 7471B	10-16-23	10-16-23	
Nickel	58	2.7	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	43	2.7	EPA 6010D	10-13-23	10-13-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013SM1					
Arsenic	ND	10	EPA 6010D	10-13-23	10-13-23	
Barium	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Chromium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Copper	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Lead	ND	5.0	EPA 6010D	10-13-23	10-13-23	
Nickel	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	10	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Zinc	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Laboratory ID:	MB1016S1					
Mercury	ND	0.25	EPA 7471B	10-16-23	10-16-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-091-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	18.0	17.5	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	9.65	9.10	NA	NA	NA	NA	6	20
Copper	16.6	17.8	NA	NA	NA	NA	7	20
Lead	24.5	27.9	NA	NA	NA	NA	13	20
Nickel	7.25	7.35	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	43.8	42.7	NA	NA	NA	NA	3	20

Laboratory ID:	10-089-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-091-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	102	101	100	100	ND	102	101	75-125	1	20
Barium	116	115	100	100	18.0	98	97	75-125	1	20
Cadmium	47.3	46.4	50.0	50.0	ND	95	93	75-125	2	20
Chromium	109	107	100	100	9.65	100	97	75-125	2	20
Copper	67.1	65.7	50.0	50.0	16.6	101	98	75-125	2	20
Lead	282	275	250	250	24.5	103	100	75-125	2	20
Nickel	108	105	100	100	7.25	101	98	75-125	2	20
Selenium	94.0	93.1	100	100	ND	94	93	75-125	1	20
Silver	24.6	24.0	25.0	25.0	ND	98	96	75-125	2	20
Zinc	139	139	100	100	43.8	95	95	75-125	0	20

Laboratory ID:	10-089-02									
Mercury	0.509	0.527	0.500	0.500	0.0446	93	97	80-120	3	20



Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
ST-piping-SS-20-6.5	10-177-01	12	10-13-23
ST-piping-SS-21-2.0	10-177-02	10	10-13-23
ST-piping-SS-22-2.0	10-177-03	9	10-13-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.qnsite-env.com

Turnaround Request
(in working days)

Laboratory Number: 10-177

[illegible]

Appendix B

Final Clean Closure Report

Final Dangerous Waste Clean Closure Report

Former Jorgensen Forge Site
RCRA Site ID: WAD000602813

8531 East Marginal Way South
Tukwila, WA 98108

MAY 10th, 2024

Prepared for:

Star Forge, LLC
8531 East Marginal Way South
Tukwila, WA 98108

Prepared by:



DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98134

Executive Summary

This Final Dangerous Waste Clean Closure Report has been prepared by DH Environmental, Inc. for the purpose of documenting efforts undertaken by Star Forge, LLC (Star Forge) to carry out Clean Closure of the Dangerous Waste Management Units at the Former Jorgensen Forge Site located at 8531 East Marginal Way South, Tukwila, WA. In addition, this report presents documentation of disposal of chemicals and other waste generated from demolition of the Former Jorgensen Forge Facility.

The facility is subject to Clean Closure because it was a Large Quantity Generator of Dangerous Waste and operated multiple Dangerous Waste Management Units. As of the date of this report, Star Forge has completed the required Clean Closure activities under the Dangerous Waste Regulations (WAC 173-303-200(h)) and in accordance with Agreed Order No. DE 21034 between the Washington State Department of Ecology and Star Forge, as well as the associated Interim Action Work Plan that incorporated final elements required for Clean Closure. This Final Dangerous Waste Clean Closure Report is a follow-up document to the Star Forge's interim Clean Closure Report submitted to Ecology in July 2022, which is attached for reference.

Project Information

Project Title	Former Jorgensen Forge Site
Project Location	8531 East Marginal Way South Tukwila, WA 98108
Project Owner	Star Forge, LLC 8531 East Marginal Way South Tukwila, WA 98108
Report Delivery Date	April 2024
Report Prepared by	Stacy Fox, CHMM Sr. Project Scientist DH Environmental, Inc. Nathan Moxley, LG, LHG Principal Hydrogeologist DH Environmental, Inc. David Hill, PE, CHMM Principal Engineer DH Environmental, Inc. 

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Attachment 6: July 2020 Dangerous Waste Clean Closure Report

LIST OF ACRONYMS AND ABBREVIATIONS

CAA	Central Accumulation Area
DOT	Department of Transportation
DWMU	Dangerous Waste Management Unit
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
HVOC	Halogenated Organic Compounds
MTCA	Washington State Model Toxics Control Act
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
RCRA	Resource Conservation and Recovery Act
SVOC	Semivolatile Organic Compounds
TCLP	Toxicity Characteristic Leachate Procedure
TSDF	Treatment, Storage and Disposal Facility
VOC	Volatile Organic Compounds

1.0 OVERVIEW

DH Environmental, Inc. (DH Environmental) has prepared this Report on behalf of Star Forge, LLC (Star Forge) to document final Clean Closure of the former Jorgensen Forge Facility located at 8531 East Marginal Way South, Tukwila, Washington (the “Facility”; Figure 2). The purpose of this document is to report the results of the efforts that have been undertaken by Star Forge to carry out Clean Closure of the applicable Dangerous Waste Management Units at the Facility in accordance with WAC 173-303-610(2) and (5) and in accordance with Agreed Order No. DE 21034 between the Washington State Department of Ecology and Star Forge LLC, as well as the associated Interim Action Work Plan that incorporated final elements required for Clean Closure. This Final Dangerous Waste Clean Closure Report is a follow-up document to Star Forge’s interim Clean Closure Report submitted to Ecology in July 2022, which is attached for reference.

1.1 Site Description¹

The former Jorgensen Forge Site is approximately 21.6 acres, located in an industrial area along the east bank of the Lower Duwamish Waterway. The site is bordered to the north by the Boeing Plant 2 property, and to the south by the Boeing Isaacson property. It is bordered to the west by the Lower Duwamish Waterway, and to the east-by-East Marginal Way South and the King County Regional Airport.

The Facility was used from 1942-1965 for fabrication of structural steel, tractor and road equipment. Operations at the site included forging and heat-treating by Isaacson Iron Works, which operated as a U.S. naval vessel manufacturer.

The Facility was owned and operated by Earle M. Jorgensen Company (EMJ) from 1965 until 1992, when it was purchased by the plant management group and became the Jorgensen Forge Corporation. Jorgensen manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. They also processed nickel, titanium, and specialized alloys.

Contamination at the Facility is the result of heavy industrial use since the 1940’s, and possible contaminated groundwater migrating onto the property from off-site sources.

Contaminants of concern at the site include:

- Polychlorinated biphenyls (PCBs)
- Volatile organic compounds (VOCs)
- Halogenated volatile organic compounds (HVOCs)
- Metals (including but not limited to arsenic, cadmium, chromium, lead, nickel, copper, and zinc)
- Petroleum hydrocarbons

¹ Information in this section was derived from the Washington State Department of Ecology’s Jorgensen Forge Corp. Site Information webpage page: <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=3689>

1.2 Clean Closure Overview

Closure is the term used in the Dangerous Waste Regulations to refer to the process of taking a Dangerous Waste Management Unit (DWMU) out of service and properly cleaning up or decontaminating the DWMU and any areas affected by potential releases from the DWMU. When this process is finished, a unit is referred to as “closed.”²

Generators are required to meet closure performance standards at WAC 173-303-610(2) and (5). This means that when a DWMU is closed all Dangerous Waste must be removed, and DWMUs that managed or accumulated Dangerous Wastes must be removed or decontaminated.

After wastes and waste residues are removed and units have been inspected, facility owners and generators will manage two types of materials during closure: debris (such as unit parts, structures, piping, equipment, and unit containment systems) and environmental media (such as soil, groundwater, surface water, and sediments). In accordance with Ecology’s guidance for Clean Closure, if environmental media has been contaminated as a result of DWMU operations, and cleanup levels have not been established for a site, then by default, MTCA Method A or B unrestricted cleanup levels can be used to achieve Clean Closure of the associated DWMU.

The following sections describe the efforts taken to comply with the requirements for Clean Closure of the DWMUs. In addition, all chemical products, abated hazardous building materials, and industrial materials at the facility that could not be beneficially reused were designated in accordance with WAC 173-303-070 and disposed of off-site at a RCRA permitted Treatment, Storage, and Disposal Facility (TSDF), or other properly permitted disposal facility if the waste did not designate as Dangerous Waste. Table 1 summarizes the waste disposed of associated with the DWMU Clean Closures, and chemical products and industrial materials requiring disposal as dangerous waste for demolition and overall closure of the Facility. The initial Clean Closure Report submitted in July 2020 contains details about removal and disposal of other wastes not discussed in this final Clean Closure Report but are included in the disposal summary in Table 1.

²Ecology, 2005. *Guidance for Clean Closure of Dangerous Waste Units and Facilities*. Hazardous Waste and Toxics Reduction Program. Publication No. 94-111.

2.0 CLOSURE OF DANGEROUS WASTE MANAGEMENT UNITS

For the purpose of Clean Closure in accordance with the Dangerous Waste Regulations, DH Environmental evaluated various areas at the Facility that generated and/or stored Dangerous Waste through historical records and discussions with former staff. Some of these areas served as Dangerous Waste Central Accumulation Areas (CAAs), while others were locations where waste was generated and temporarily stored. Figure 2 shows the areas determined to be DWMU's subject to closure.

The following areas were determined to be DWMU's subject to closure because they either served as CAAs, or waste was generated and temporarily stored and handled in quantities greater than 55 gallons. The Clean Closure work summarized below was all conducted in conjunction with general demolition of the entire facility in 2023 and 2024, and in accordance with the Interim Action Workplan.

2.1 Central Accumulation Area DWMU

The Central Accumulation Area (CAA) was one of two 90/180-day Dangerous Waste accumulation areas. The CAA was located on the northwest corner of the Facility and the location is shown in Figure 2. The CAA was an approximately 1,000 square feet (SF) structure with aluminum siding, a concrete slab, and an approximately 1 ft. concrete base wall that served as secondary containment. The CAA stored Dangerous Waste in drums and small containers generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time contained a 300 gallon above ground storage tank that serviced diesel fuel. Consequently, the structure was also known as the "diesel house". As discussed in the July 2020 Clean Closure Report, due to visual staining of the concrete inside the CAA, an attempt to decontaminate the concrete was made using high pressure steam and water sprays. However, subsequent sampling of the concrete slab revealed the concrete still exceeded MTCA Method A, Unrestricted, for Diesel Range Organics. Consequently, it was written into the Interim Action Workplan that the concrete would be removed, designated, and disposed of off-site, and the underlying soil would be sampled for Diesel Range Organics in accordance with the IAWP Sampling and Analysis Plan to determine if any excavation of underlying soil would be necessary to achieve Clean Closure of this DWMU. In August 2023, the CAA was demolished, and the underlying soil concentrations of Diesel Range Organics were confirmed to be less than the MTCA Method A unrestricted soil cleanup level of 2,000 milligrams per kilogram (mg/kg). After backfilling the footprint of the CAA with approved and tested clean fill (crushed rock), the CAA was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5). Further details about closure of the CAA, including data and photo documentation, are included in the individual CAA Clean Closure Package in Attachment 1.

2.2 Tote Storage Area DWMU

The Tote Storage Area was another 90/180-day Dangerous Waste accumulation area located on the west side of the Facility and the location is shown in Figure 2. The Tote Storage Area was an approximately 800 SF structure with wooden siding and an asphalt slab. The Tote Storage Area stored Dangerous Waste and used oil totes and drums generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time was used to clean and etch product samples prior to laboratory testing.

Subsequently, the structure was also known as the “Acid House” or “Etch House” before it was used as a 90/180-day Dangerous Waste accumulation area in the 1990s.

Similar to the CAA, the Tote Storage Area slab was found to be visually impacted with staining and suspected historical releases. After the slab was treated in accordance with Clean Closure Performance standards using high-pressure steam and water sprays, the asphalt slab was sampled in June of 2020, and found to exceed MTCA Method A concentrations for Diesel Range Organics as well as PCBs. In addition, subsurface sampling in the Tote Storage Area was conducted by Shannon and Wilson in November 2020 and January 2021 to support a Remedial Investigation being conducted by the former owner of the facility (EMJ). The results of the subsurface sampling of the Tote Storage Area revealed that PCBs exceeded the MTCA Method A soil cleanup level of 1 mg/kg, at depths up to 1.5-feet below grade in two locations. Consequently, it was written into the IAWP that the concrete would be removed, designated, and disposed of off-site, and the underlying soil would be excavated to depths necessary to achieve cleanup levels. In addition, the IAWP required confirmation sampling to be conducted in accordance with the IAWP Sampling and Analysis Plan to demonstrate that cleanup levels for PCBs and diesel range organics were obtained.

In October 2023, the Tote Storage Area superstructure and slab were demolished, and excavation was conducted to maximum depth of 2 feet within the footprint of the structure (including the entrance ramp). This resulted in removal of approximately 98 tons of soil/debris from the Tote Storage Area footprint. After confirmation sampling confirmed all cleanup levels were met, the footprint of the Tote Storage Area was backfilled with approved and tested clean fill (crushed rock). As such, the Tote Storage Area was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5). Further details about closure of the Tote Storage Area, including data and photo documentation, are included in the individual Tote Storage Area Clean Closure Package in Attachment 2.

2.3 Baghouse DWMU

The baghouse and baghouse processing area were located north of the west end of the main building and north of the tote storage building. The baghouse building was approximately 4,000 SF, and housed equipment to capture and contain dust from the baghouse tunnel that conveyed air and dust from the former melt shop to the baghouse. The baghouse dust was designated as a K061 waste stream as it meets the definition of K061 Specific Source Waste from iron and steel sources in accordance with WAC 173-303-9904. The baghouse processing area and concrete slab were divided by a wall thereby creating two separate areas denoted as ‘Baghouse North’ and ‘Baghouse South’ for the purposes of cleaning and sampling. Only the Baghouse North slab exceeded Clean Closure cleanup levels for diesel range organics and hexavalent chromium. After the baghouse structure was demolished, the Baghouse North slab was excavated and disposed of offsite as K061 Hazardous Waste. The underlying soil was then sampled in accordance with the IAWP and found to meet MTCA Method A cleanup levels for diesel range organics and hexavalent chromium.

The baghouse tunnel was the baghouse dust conveyance duct connecting the former melt shop and the baghouse. Although significant dust removal was conducted in 2019 by Clean Harbors as contracted by Star Forge, some K061 dust remained in the duct that could not be safely removed until it was lowered to the ground and reduced to smaller sections. The baghouse tunnel was cut in place and carefully lowered to the ground using cranes onto

bermed exclusion zones where the ducting and all associated equipment was inspected again prior to further reduction. All remaining dust was removed using a combination of “wet wiping”, scraping, and the use of a vacuum with HEPA filters. All media generated from removing the residual dust inside the duct was managed as K061 Hazardous Waste. Once the Clean Debris performance standards were met in accordance with WAC 173-303-610(2) and (5), the tunnel sections were shipped off site for recycling. Where sections of the ducting could not meet the Clean Debris standard, for example, along expansion joints, those sections were disposed of as K061 waste.

In November 2023, the baghouse and associated equipment were effectively demolished. The decontamination of the baghouse media, along with disposal of materials that could not be reasonably decontaminated resulted in generation and disposal of approximately 106 tons of K061 Debris that was placed in 20-yard roll-off bins and shipped via rail to Chemical Waste Management in Arlington, OR for macroencapsulation and disposal. In addition, approximately 282 gallons (2,350 lbs) of K061 designated water was generated from decontamination efforts. This water was also disposed of at Chemical Waste Management in Arlington, OR.

On 11/18/2023, the underlying soil of the Baghouse North footprint was sampled in accordance with the IAWP SAP and was demonstrated to meet all cleanup levels. After the footprint of the baghouse was backfilled with approved and tested clean fill (crushed rock), the Baghouse DWMU was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5).

An individual DWMU Closure Package was developed for each of these areas and is provided in Attachments 1-3. Confirmation sampling laboratory data of underlying soil, photo logs, and disposal documentation (hazardous waste manifests) are included in the individual closure packages. The closure requirements for each DWMU have been met and are described in detail in the individual packages.

3.0 LIME HOPPER RELEASE INCIDENT

On the southwest side of the Facility, there was an elevated storage hopper approximately 25 feet above ground containing lime that was historically used in forging operations. This hopper was enclosed inside a structure and elevated, so it was not apparent to anyone that it contained any materials. This area of the facility, referred to as the “melt shop,” ceased operation in 2015, prior to Star Forge’s ownership of the facility. Therefore, the on-site presence of this lime was unknown to all parties.

On 11/22/2023, the lime hopper was breached by Star Forge’s demolition contractor while cutting into the structure for demolition. The breach resulted in an estimated 500-lbs of lime falling from the vessel onto the ground. Due to the northerly wind direction and location of the hopper being approximately 150 feet from the south property line, some of the lime crossed over onto Boeing’s property adjacent to the south. The lime did not impact the Duwamish River because the wind was blowing directly south. The wind was light to moderate at the time of the release.

All catch basins in the area of demolition were blocked prior to the incident occurring as a stormwater Best Management Practice. In addition, all stormwater drainage at the Facility is treated and batched tested before discharging the Lower Duwamish under two Administrative Orders with the WA State Department of Ecology.

No injuries or exposures were reported because of this release. Lime (calcium hydroxide/calcium oxide) is not highly toxic, but it does designate as Dangerous Waste in accordance with the WA State Dangerous Waste regulations because when mixed with an equal weight of water, the pH exceeds 12.5. This testing was conducted on-site by DH Environmental with a pH meter. Washington has a State-Only Dangerous Waste designation of WSC2 for corrosive solids. Due to this release qualifying as a “Dangerous Waste Release”, the Washington State Emergency Management Division (1-800-258-5990) was notified in addition to the National Response Center (1-800-424-8802). Beau Johnson, the Ecology Site Manager, was also notified, in addition to the Boeing EHS manager for the property to the south. The incident was assigned a Washington Statewide Environmental Tracking System (ERTS) number 726905.

After initial actions were taken to clean up the lime that was released to the ground and temporarily contain the lime inside the hopper to avoid further dispersion, Star Forge’s team assessed removal actions and began planning for removal of the remaining lime in the elevated hopper. From 11/22/2023 – 12/7/2023, Star Forge, through its demolition contractor, Construction Group International, deployed HAZMAT workers elevated on a scissor lift to remove the remaining lime from the elevated hopper using air movers and vacuum boxes to contain the lime without dispersion. The lime was successfully removed from the hopper and contained in DOT vacuum bins for off-site disposal. Impacted subsurface debris and gravel was loaded into roll off boxes for offsite disposal as well. All lime and impacted debris associated with the cleanup was designated as WA State Dangerous Waste Corrosive Solid (WSC2) and WA State Dangerous Waste, Toxic (WT02). This resulted in disposal of 95 tons of lime and impacted debris. All of the waste associated with the cleanup was disposed of at Chemical Waste Management in Arlington, OR. Attachment 5 is the Incident Report that was delivered to all authorities and parties notified of the incident.

5.0 HAZARDOUS BUILDING MATERIALS ABATEMENT AND DISPOSAL

In August 2019, SoundEarth Strategies contracted with Star Forge to complete the pre-demolition hazardous building materials survey of the Former Jorgensen Forge Facility in accordance with the Washington State Labor and Industries “Good Faith Inspection” requirements (WAC 296-62-07721) and the Puget Sound Clean Air Agency asbestos survey requirements.

From September 2019 to February 2020, Star Forge’s demolition contractor, Construction Group International (a licensed abatement contractor) conducted abatement activities of the hazardous building materials identified in the survey reports prior to demolition except for the Galbestos³ siding identified in the survey that was found to contain asbestos greater than one percent. Removal of the Galbestos siding was conducted in conjunction with demolition in 2023 and 2024 and was classified as Class 2 Asbestos Work⁴.

Abatement of the hazardous building materials identified in the pre-demolition survey resulted in removal and disposal of approximately 72 cubic yards of materials classifying as friable asbestos and 661 tons of materials classifying as non-friable asbestos which was primarily Galbestos siding. In addition, PCB Bulk Product Waste⁵ was identified in the Tote Storage Area paint on structural beams and was profiled and disposed of along with other PCB Remediation Waste associated with the Tote Storage Area DWMU closure (see Attachment 2 for further details).

³ Galbestos is the registered trademark for galvanized panels consisting of thick gauge, corrugated galvanized metal sheeting with thin, double-sided asbestos felt-like coatings.

⁴ *Class II asbestos work* means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

⁵ PCB bulk product waste is waste derived from products manufactured to contain PCB in a non-liquid state at 50 parts per million or greater, such as paint and sealants.

6.0 SUMMARY

DH Environmental was contracted by Star Forge to assist with facilitation and documentation of Dangerous Waste Clean Closure for the former Jorgensen Forge Facility located at 8531 East Marginal Way South Tukwila, WA. From 2020 – 2024, DH Environmental supported Star Forge with Facility cleanouts from shops and work areas, DWMU designation and evaluation, DWMU cleaning and confirmation sampling, and overall documentation of Clean Closure activities occurring concurrently with demolition operations. As of the date of this report, Star Forge has completed the required Clean Closure requirements under the Dangerous Waste Regulations (WAC 173-303-200(h)) and in accordance with Agreed Order No. DE 21034 between the Washington State Department of Ecology and Star Forge, LLC. The 2023 Dangerous Waste Annual Report has been updated to include notification of closure of the three DWMUs described in in this Final Clean Closure Report and is included in Attachment 4.

TABLE - 1
Star Forge, LLC
Hazardous Waste Shipments from Overall Facility Closure
2018 - 2024

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code	TSCA
CH1721830-1	PPE from decontamination of facility	11/08/2018	75	12885240FLE	D007	NA	NA
CH1721784-1	Sludge from decontamination of facility	11/08/2018	1200	12885239FLE	D007	NA	NA
CH1735588	Aquasol 20 20	01/11/2019	356	012885528FLE	D002	NA	NA
CH1742114	CH2O Boiler Treatment - 6267	01/11/2019	293	012885527FLE	D002	NA	NA
CH1750992	Consolidated Aerosol Liquids	01/11/2019	139	012885528FLE	D001, D035	NA	NA
1282936-1	Contaminated Grease	01/11/2019	235	012885527FLE	NONE	WT02	NA
CH1735567	Coolicide - Loosepack	01/11/2019	110	012885528FLE	NONE	WP02, WT02	NA
CH1729496	Eliminator 103 - Loosepack	01/11/2019	25	012885528FLE	NONE	WT02	NA
1282936-1	Contaminated Grease	01/17/2019	167	011776126FLE	NONE	WT02	NA
CH1786528	Consolidated Acids	02/18/2019	132	012884952FLE	D002	NA	NA
CH1786533	Flammable acids	02/18/2019	135	012884952FLE	D001, D002	NA	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	02/18/2019	30	012884952FLE	D002	WT02	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	02/18/2019	22	012884952FLE	D001, D002	WT02	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	02/18/2019	6	012884952FLE	D002	WT02	NA
LCCRB	Labpack Basic & Basic Compatibles For Incineration	02/18/2019	60	012884952FLE	D002	WT02	NA
LCCRC	Labpack Organics For Incineration	02/18/2019	37	012884952FLE	NONE	WT02	NA
LCCRO	Labpack Oxidizers For Incineration	02/18/2019	7	012884952FLE	D001, D003	WT02	NA
ES1785848	Pit Cleaning Sludge	02/18/2019	8457	012886241FLE	D004, D007, D008	NA	NA
ES1785845	Pit Cleaning Sludge	02/18/2019	2788	012886241FLE	D006, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	03/15/2019	8418	012886248FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	03/15/2019	10841	012886264FLE	D004, D007, D008	NA	NA
ES1795989	Ring Mill Coolant - Antifreeze	03/22/2019	9988	012886287FLE	NONE	WT02	NA
ES1785848	Pit Cleaning Sludge	05/03/2019	9851	012886309FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	05/03/2019	2865	012886328FLE	D004, D007, D008	NA	NA
OR329284	Pit Cleaning Sludge	05/08/2019	8500	011968468FLE	D004, D007, D008	NA	NA
OR329284	Pit Cleaning Sludge	05/17/2019	12780	011961581FLE	D004, D007, D008	NA	NA
OR329284	Pit Cleaning Sludge	05/17/2019	3060	011961582FLE	D004, D007, D008	NA	NA
OR340979	Vault Sludge	05/20/2019	10000	012886361FLE	NONE	WP02, WT02	NA
OR329284	Pit Cleaning Sludge	05/23/2019	16160	011961597FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	05/31/2019	17976	012886371FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	06/03/2019	7719	012886372FLE	D004, D007, D008	NA	NA
ES1795989	Ring Mill Coolant - Antifreeze	06/12/2019	1260	012886377FLE	NONE	WT02	NA
OR340979	Vault Sludge	06/25/2019	10960	012886384FLE	NONE	WP02, WT02	NA
OR340979	Vault Sludge	06/25/2019	1080	012886385FLE	NONE	WP02, WT02	NA
OR340979	Vault Sludge	06/26/2019	39660	011968520FLE	NONE	WP02, WT02	NA
OR340979	Vault Sludge	06/26/2019	33580	011968521FLE	NONE	WP02, WT02	NA
OR340979	Vault Sludge	07/10/2019	53120	020246762JK	NONE	WP02, WT02	NA
1877983	Echogel - Unused	08/02/2019	554	011968578FLE	NONE	WT02	NA
1883817	Echogel - Used	08/02/2019	2946	011968578FLE	NONE	WT02	NA
ES1785848	Pit Cleaning Sludge	08/06/2019	12786	012886399FLE	D004, D007, D008	NA	NA
OR329284	Pit Cleaning Sludge	09/12/2019	15820	011961788FLE	D004, D007, D008	NA	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	10/11/2019	252	013867363FLE	D001, D002	NA	NA
LCCRB	Labpack Basic & Basic Compatibles For Incineration	10/11/2019	200	013867363FLE	D002	NA	NA
OR343220	Oil Tank Cleaning Sludge	11/06/2019	19160	012886418FLE	NONE	WT02	NA
49312	Area-wide Dust	11/18/2019	63320	012886445FLE	NONE	WT02	NA
49312	Area-wide Dust	11/19/2019	64780	012886444FLE	NONE	WT02	NA
49312	Area-wide Dust	11/21/2019	63020	012886471FLE	NONE	WT02	NA
49312	Area-wide Dust	11/21/2019	63000	012886472FLE	NONE	WT02	NA
49312	Area-wide Dust	11/25/2019	61380	012886473FLE	NONE	WT02	NA
49312	Area-wide Dust	11/25/2019	64320	012886474FLE	NONE	WT02	NA
49312	Area-wide Dust	12/03/2019	62000	012886475FLE	NONE	WT02	NA
49312	Area-wide Dust	12/03/2019	64000	012886476FLE	NONE	WT02	NA
49312	Area-wide Dust	12/05/2019	62000	012886477FLE	NONE	WT02	NA
49312	Area-wide Dust	12/05/2019	64000	012886478FLE	NONE	WT02	NA
49312	Area-wide Dust	12/09/2019	62000	012886479FLE	NONE	WT02	NA
49312	Area-wide Dust	12/09/2019	62000	012886480FLE	NONE	WT02	NA
49312	Area-wide Dust	12/09/2019	64000	012886481FLE	NONE	WT02	NA
49312	Area-wide Dust	12/10/2019	62000	012886482FLE	NONE	WT02	NA
49312	Area-wide Dust	12/11/2019	62000	012886483FLE	NONE	WT02	NA
49312	Area-wide Dust	12/11/2019	62000	012886484FLE	NONE	WT02	NA
49312	Area-wide Dust	12/11/2019	64000	012886485FLE	NONE	WT02	NA
49312	Area-wide Dust	12/12/2019	62000	012886486FLE	NONE	WT02	NA
49312	Area-wide Dust	12/13/2019	63020	012886487FLE	NONE	WT02	NA
49312	Area-wide Dust	12/13/2019	64000	012886488FLE	NONE	WT02	NA
49312	Area-wide Dust	12/15/2019	62000	012886491FLE	NONE	WT02	NA
49312	Area-wide Dust	12/16/2019	64000	012886489FLE	NONE	WT02	NA
49312	Area-wide Dust	12/16/2019	62000	012886490FLE	NONE	WT02	NA
49312	Area-wide Dust	12/17/2019	64000	012886492FLE	NONE	WT02	NA
49312	Area-wide Dust	12/18/2019	63000	012886493FLE	NONE	WT02	NA
49312	Area-wide Dust	12/18/2019	62000	012886494FLE	NONE	WT02	NA
49312	Area-wide Dust	12/19/2019	62000	012886495FLE	NONE	WT02	NA
49312	Area-wide Dust	12/19/2019	64000	012886509FLE	NONE	WT02	NA
49312	Area-wide Dust	12/20/2019	64000	012886500FLE	NONE	WT02	NA
49312	Area-wide Dust	12/20/2019	62000	012886501FLE	NONE	WT02	NA
49312	Area-wide Dust	12/20/2019	62000	012886502FLE	NONE	WT02	NA
49312	Area-wide Dust	01/08/2020	62740	012886503FLE	NONE	WT02	NA
49312	Area-wide Dust	01/30/2020	60560	012886504FLE	NONE	WT02	NA
49312	Area-wide Dust	02/10/2020	61460	012886505FLE	NONE	WT02	NA
49312	Area-wide Dust	02/10/2020	61100	012886506FLE	NONE	WT02	NA
OR344535	Baghouse Dust	02/10/2020	19760	014224090FLE	K061	NA	NA
OR343941	AOD pit Solids	02/11/2020	34260	014224089FLE	D007	NA	NA
OR343941	AOD pit Solids	02/11/2020	21660	014224091FLE	D007	NA	NA
49312	Area-wide Dust	02/12/2020	62780	012886507FLE	NONE	WT02	NA

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2018 - 2024

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code	TSCA
49312	Area-wide Dust	02/13/2020	62220	012886508FLE	NONE	WT02	NA
OR344529	Baghouse Dust/Debris	02/17/2020	4440	013537409FLE	K061	NA	NA
OR344529	Baghouse Dust/Debris	02/17/2020	3880	013537410FLE	K061	NA	NA
OR344529	Baghouse Dust/Debris	02/17/2020	2840	013537411FLE	K061	NA	NA
OR344535	Baghouse Dust	02/25/2020	20620	013537408FLE	K061	NA	NA
49312	Area-wide Dust	02/27/2020	63500	012886511FLE	NONE	WT02	NA
OR344529	Baghouse Dust/Debris	03/12/2020	4220	013537460FLE	K061	NA	NA
OR344341	Stormwater Treatment Tank Sludge	03/19/2020	48900	012886530FLE	D007, D008	NA	NA
49312	Area-wide Dust	03/31/2020	20700	012886541FLE	NONE	WT02	NA
49312	Area-wide Dust	03/31/2020	27020	012886544FLE	NONE	WT02	NA
49312	Area-wide Dust	03/31/2020	16600	012886545FLE	NONE	WT02	NA
49312	Area-wide Dust	03/31/2020	20860	012886546FLE	NONE	WT02	NA
49312	Area-wide Dust	03/31/2020	21480	012886551FLE	NONE	WT02	NA
CH1997101	Paint chips/Dust/Sandblast media	04/01/2020	180	014582446FLE	D005, D006, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	04/01/2020	400	014582446FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	04/01/2020	400	014582446FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	04/01/2020	400	014582446FLE	D004, D007, D008	NA	NA
CH1997777	Safety Klean Cleaning Solvent	04/01/2020	190	014582447FLE	D001, D039	NA	NA
CH1997727	Salt Rock	04/01/2020	400	014582446FLE	D004, D005, D006, D007, D008, D010	NA	NA
CH1997099	Oil Based Paint	04/02/2020	120	014582452FLE	D001, D005, D006, D007, D008, D011, D035	NA	NA
ES1785848	Pit Cleaning Sludge	04/02/2020	600	014582453FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	04/02/2020	600	014582453FLE	D004, D007, D008	NA	NA
ES1785848	Pit Cleaning Sludge	04/02/2020	600	014582453FLE	D004, D007, D008	NA	NA
49312	Area-wide Dust	04/20/2020	11580	012886243FLE	NONE	WT02	NA
OR344535	Baghouse Dust	04/28/2020	31660	008281988FLE	K061	NA	NA
OR344535	Baghouse Dust	04/28/2020	31500	008281990FLE	K061	NA	NA
CH2030655	Filter Cleaning Wash Water contaminated with Baghouse Dust	06/18/2020	8650	014587860FLE	K061, D007	NA	NA
CH344529	Baghouse Dust/Debris	06/18/2020	700	014587861FLE	K061	NA	NA
OR345145	Baghouse Decon Water	06/29/2020	375	020121293JJK	K061	NA	NA
OR345146	Baghouse Dust	06/29/2020	5000	020121293JJK	K061	NA	NA
OR345148	Baghouse Debris	06/29/2020	600	020121293JJK	K061	NA	NA
OR345688	Spill cleanup debris from vandalized transformer	09/25/2020	220	021751122JJK	NONE	NONE	PCB
OR346417	Lithium Grease	02/19/2021	30	021751123JJK	NONE	WT02	NA
OR346415	Hydrochloric Acid	02/19/2021	25	021751123JJK	D002	NA	NA
OR350784	Non-Fluorinated AFFF	06/14/2022	667	023708599JJK	NONE	WP02	NA
OR350789	AFFF contaminated Debris Disposal of Non-flourinated AFFF vessels.	06/16/2022	2080	023708603JJK	NONE	WP02	NA
OR350974	Catch Basin Solids Waste	06/24/2022	1914	023708607JJK	NONE	NONE	PCB
OR356878	Lead Paint Chips - Oil Shed Demo	10/20/2023	950	023708954JJK	D008	NA	NA
OR350947	Spill cleanup debris from vandalized transformer	10/20/2023	1584	023708954JJK	NONE	NONE	PCB
OR356878	Lead Paint Chips	10/20/2023	950	023708954JJK	D008	NA	NA
OR356857	Tote Storage Building Demolition	10/24/2023	57,380.00	023708958JJK	NONE	NONE	PCB
OR356857	Tote Storage Building Demolition	10/24/2023	57,840.00	023708959JJK	NONE	NONE	PCB
OR356857	Tote Storage Building Demolition	10/24/2023	44,900.00	023708960JJK	NONE	NONE	PCB
OR356857	Tote Storage Building Demolition	10/24/2023	35,220.00	023708961JJK	NONE	NONE	PCB
OR356547	K061 Debris	10/25/2023	5400	023708963JJK	K061	NA	NA
OR356547	K061 Debris	11/21/2023	41860	023708972JJK	K061	NA	NA
OR356547	K061 Debris	11/21/2023	38900	023708973JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	47320	023708986JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	7480	023708987JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	28940	023708988JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	9320	023708989JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	31880	023709000JJK	K061	NA	NA
OR357669	Lime Decon water	12/11/2023	4000	023708907JJK	D002	NA	NA
OR357533	Lead Debris	12/14/2023	37120	025895501JJK	D008	NA	NA
OR357533	Lead Debris	12/14/2023	50840	025895502JJK	D008	NA	NA
OR357533	Lead Debris	12/14/2023	36880	025895505JJK	D008	NA	NA
OR357533	Lead Debris	12/14/2023	48980	025895506JJK	D008	NA	NA
OR357533	Lead Debris	12/14/2023	35540	025895507JJK	D008	NA	NA
OR357535	Lime Debris	12/14/2023	18280	025895512JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	19100	025895513JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	12180	025895514JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	31600	025895515JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	30220	025895516JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	32890	025895517JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	26000	025895518JJK	NONE	WSC2, WT02	NA
OR357535	Lime Debris	12/14/2023	19110	025895519JJK	NONE	WSC2, WT02	NA
OR357533	Lead Debris	12/15/2023	24780	025895508JJK	D008	NA	NA
OR357562	K061 decon water	12/18/2023	2200	025895530JJK	K061	NA	NA
OR357562	K061 decon water	12/18/2023	150	025895530JJK	K061	NA	NA
OR357799	Debris from cleanup of vandalized transformer	12/27/2023	57140	018614506FLE	NONE	NONE	PCB
OR357799	Debris from cleanup of vandalized transformer	12/27/2023	45360	018614507FLE	NONE	NONE	PCB
OR357799	Debris from cleanup of vandalized transformer	12/27/2023	46380	018614508FLE	NONE	NONE	PCB
OR357799	Debris from cleanup of vandalized transformer	12/27/2023	54100	018614509FLE	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/11/2024	52820	017543360JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/11/2024	56820	017543361JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/22/2024	64940	025895556JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/22/2024	57600	025895557JJK	NONE	NONE	PCB
OR347800	Drained TSCA Transformer Carcass Disposal	01/24/2024	2240	025895525JJK	NONE	NONE	PCB
OR358045	Drained non-TSCA Transformer Carcass Disposal	01/24/2024	16530	025895526JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/30/2024	60152.4	025895550JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	01/30/2024	60280	025895553JJK	NONE	NONE	PCB
OR357533	Lead Debris	02/01/2024	34160	025895511JJK	D008	NA	NA
OR357930	PCB impacted soil discovered during demo of Powerhouse	02/01/2024	34440	025895551JJK	NONE	NONE	PCB
OR357930	PCB impacted soil discovered during demo of Powerhouse	02/01/2024	35120	025895552JJK	NONE	NONE	PCB
OR357533	Lead Debris	02/23/2024	23860	025895503JJK	D008	NA	NA
OR357533	Lead Debris	02/23/2024	33660	025895504JJK	D008	NA	NA
OR357533	Lead Debris	02/23/2024	31640	025895510JJK	D008	NA	NA
OR357533	Lead Debris	03/04/2024	25161	025895600JJK	D008	NA	NA
OR357533	Lead Debris	03/04/2024	23570	025895601JJK	D008	NA	NA

PLOT TIME: 5/22/2020 11:18 AM MOD TIME: 5/22/2020 11:17 AM USER: Kelley Begley DWG: P:IDH Environmental(Site)Jorgensen\DH 2020-05 Jorgensen Vic Map.dwg



8531 East Marginal Way S

0 750 1500
Scale in Feet



VICINITY MAP

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

05-22-2020

Figure
1

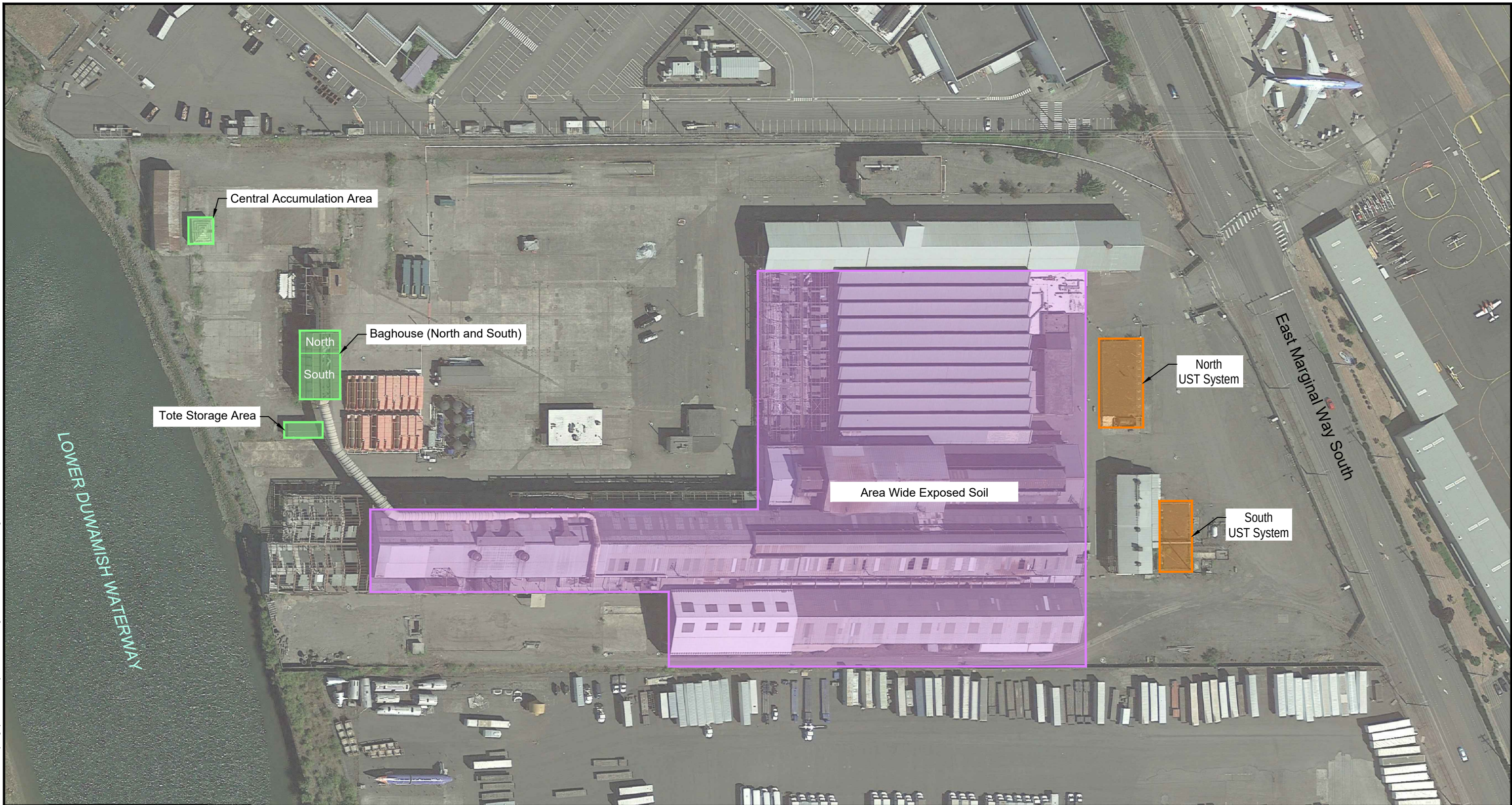
LEGEND

— Property Location



Background Images Source: Google Earth Pro 5/26/2018

PLOT TIME: 7/12/2021 2:19 PM MOD TIME: 7/12/2021 2:18 PM USER: Kelley Begley DWG: D:\Projects\DH-Star Forge\2021-07-09 STAR FORGE.dwg



Interim Action Work Areas

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA, 98108

07/12/2021

Figure

2

Legend

-  Former Dangerous Waste Management Units
-  Underground Storage Tank Systems
-  Area Wide Interior Soil and Dust

Note:

1. Aerial Photography Source: Google Earth Pro, 08/14/2020.



0 60 120
Scale in Feet



Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

1 Facility Information

Facility Name	Former Jorgensen Forge Facility
Address	8531 East Marginal Way South Tukwila, WA 98108
DWMU Name/Identifier	Central Accumulation Area (CAA)
RCRA ID Number	WAD000602813
Facility History, Function, Location and Layout	The Former Jorgensen Forge Facility was in operation by multiple owners from 1942-2017. The facility fabricated and manufactured structural steel, tractor, and road equipment, as well as large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. The facility also processed nickel, titanium, and specialized alloys.
Generator Status	Large Quantity Generator
Reason for Closure	Facility Operations Ceased Operations in 2018
DWMU Closure Date	August 31 st , 2023

2 Dangerous Waste Management Unit Information

Unit Description	The CAA was an approximately 1,000 SF structure with aluminum siding, a concrete slab, and an approximately 1 ft. concrete base wall that served as secondary containment. The CAA stored Dangerous Waste in drums and small containers generated from facility maintenance and operations.
Location	Figure 1 of shows a vicinity map, and Figure 2 shows the Site Map with locations of the Dangerous Waste Management Units.
Waste Managed at the DWMU	Although the entire history of waste operations at the CAA is unknown, based on statements from former facility staff and review of annual reports, the Dangerous Waste accumulated in the CAA DWMU was primarily facility maintenance waste such as paint related material, solvents, lubricants, and investigation derived waste from environmental investigations.
Applicable Waste Codes	D001, D035, D002, D007, D008, WT02, WP02 (not all inclusive)

3 Closure Performance Standard

WAC 173-303-200(h)

i) All dangerous waste and dangerous waste residues must be removed from the containment system. Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues must be decontaminated or removed.

ii) In addition, such a generator is exempt from all the requirements in WAC 173-303-610 and 173-303-620, except for WAC 173-303-610(2) and (5).



Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

4 Closure Activities

As discussed in the July 2020 interim Clean Closure Report, due to visual staining of the concrete inside the CAA, an attempt to decontaminate the concrete was made using high pressure steam and water sprays. However, subsequent sampling revealed the concrete still exceeded MTCA Method A, Unrestricted, for Diesel Range Organics. Consequently, it was written into the Interim Action Workplan that the concrete would be removed, designated, and disposed of off-site, and the underlying soil would be sampled for Diesel Range Organics in accordance with the IAWP Sampling and Analysis Plan to determine if any excavation of underlying soil would be necessary to achieve Clean Closure of this DWMU. August 2023, the CAA was demolished, and the underlying soil Diesel Range Organics concentrations were found to be below MTCA Method A unrestricted levels. After backfilling the footprint of the CAA with approved and tested clean fill (crushed rock), the CAA was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5). Figure CAA-1 shows the confirmation sample locations and Table CAA-1 provides the summary table of the confirmation results.

All samples were transported to OnSite Environmental of Redmond, WA for laboratory analysis following standard chain of custody procedures. OnSite Environmental is a WA State laboratory accredited in accordance with WAC 173-50. Each sample area was analyzed by the following test methods in accordance with the IAWP Sampling and Analysis Plan:

- Diesel Range Organics by NWTPH-Dx

4 Closure Status

The following closure criteria for the Central Accumulation Area DWMU have been met:

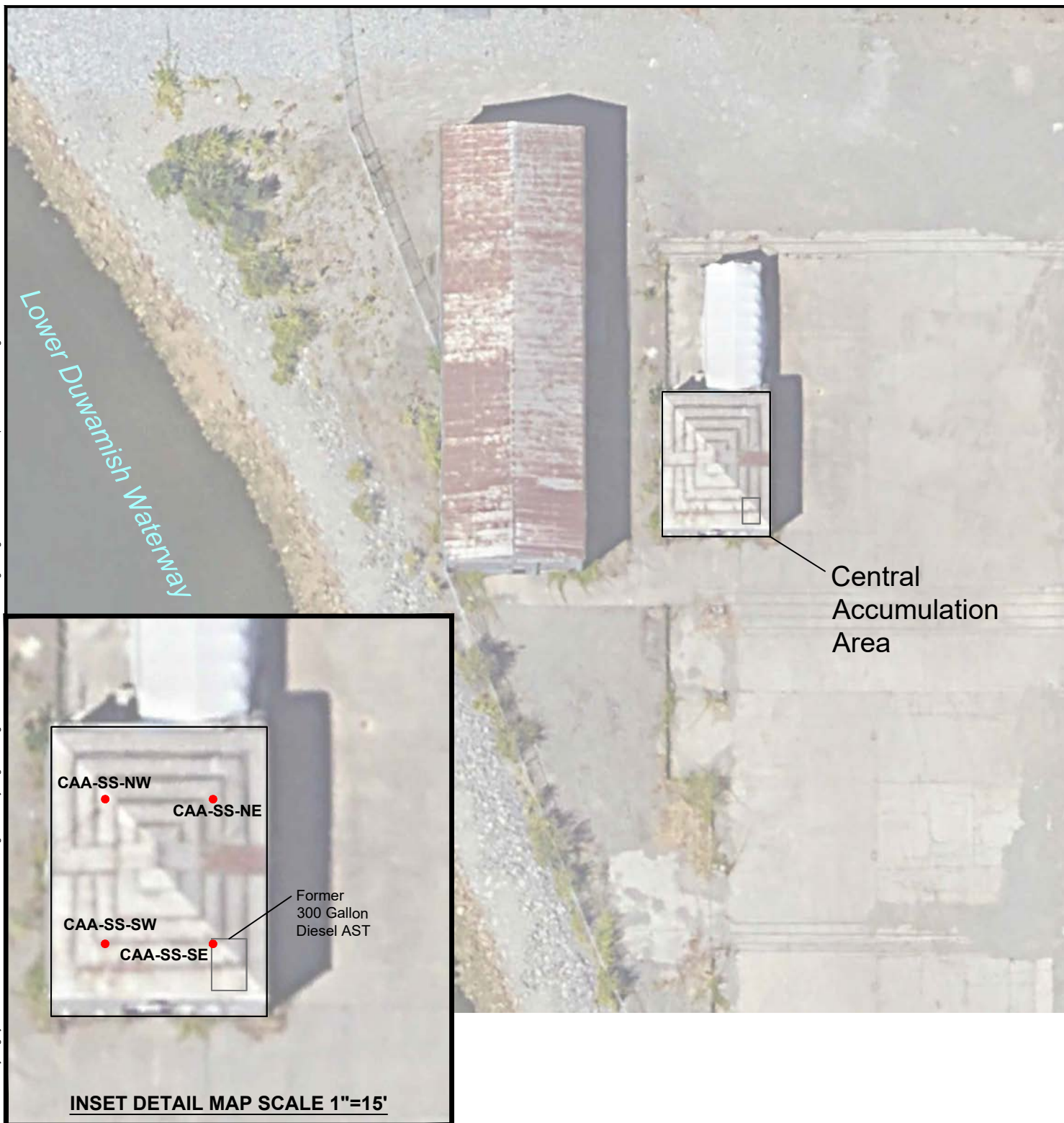
- ☒ All Dangerous Waste has been removed from the DWMU and disposed of off-site
- ☒ Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues have been decontaminated or removed.
- ☒ The underlying soil has been sampled and evaluated against MTCA Method A or B unrestricted use exposure assumptions in accordance with WAC 173-303-610(2)(b), and the results indicate the contaminant concentrations are below action levels/cleanup levels.

As of 8/31/2023, the Central Accumulation Area Clean Closure requirements have been met.

The following attached documents support documentation of the Central Accumulation Area Clean Closure completion status.

- Figure CAA-1
- Table CAA-1
- CAA Photo Log
- OnSite Environmental Laboratory Report 2308-281

PLOT TIME: 1/26/2024 2:34 PM MOD TIME: 1/26/2024 11:49 AM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge-Formerly Jorgensen\Figures\2024-01\DH 2024-01 Star Forge Dangerous Waste Central sample locations info.dwg



**DANGEROUS WASTE
CENTRAL ACCUMULATION AREA
SAMPLE LOCATIONS**

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

01-12-2024

**Figure
CAA-1**

LEGEND

- Waste Designation Sample Location



0 15 30
Scale in Feet

Table CAA-1
CAA DWMU Sample Location Data Summary
Former Jorgnensen Forge Final Clean Closure Report
Star Forge, LLC

Central Accumulation Area DWMU						
	Sample ID	CAA-SS-NW-0.25-082423	CAA-SS-NE-0.25-082423	CAA-SS-SW-0.25-082423	CAA-SS-SE-0.25-082423	CAA-SS-DUP-1-082423
Analyte						
Petroleum Hydrocarbons (mg/kg)						
Diesel Range Organics		ND (PQL 26)	790	ND (PQL 27)	87	ND (PQL 27)
Lube Oil Range Organics		93	410	220	340	290
Notes:						
1. All samples were below the MTCA Method A Unrestricted cleanup level of 2,000 mg/kg.						
Abbreviations						
ID = Identification						
ND = Non-Detect at the PQL						
NA = Not Analysed						
PQL = Practical Quantitation Limit						
Analytical Methods						
NWTPH-DX Analysis by OnSite Environmental, Inc., see lab report # 2308-281						

**Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
CAA Photo Log**



**Photo CAA-01: Facing West, Pre-Demolition Photo of the CAA (forefront building)
Date Taken: 8/24/2023**



**Photo CAA-02: Facing South, Slab Demolition Photo of the CAA
Date Taken: 8/24/2023**

**Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
CAA Photo Log (Continued – Page 2)**



**Photo CAA-03: Facing Southwest, Photo of the CAA sub-slab soil
Date Taken: 8/24/2023**



**Photo CAA-04: Facing Southwest, Photo of the CAA, backfilled and closure completed
Date Taken: 4/23/2024**



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 31, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2308-281

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 24, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023
Samples Submitted: August 24, 2023
Laboratory Reference: 2308-281
Project: Star Forge

Case Narrative

Samples were collected on August 24, 2023 and received by the laboratory on August 24, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: August 31, 2023
 Samples Submitted: August 24, 2023
 Laboratory Reference: 2308-281
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SS-NW-0.25-082423					
Laboratory ID:	08-281-01					
Diesel Range Organics	ND	26	NWTPH-Dx	8-28-23	8-28-23	
Lube Oil	93	53	NWTPH-Dx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				

Client ID:	CAA-SS-NE-0.25-082423					
Laboratory ID:	08-281-02					
Diesel Range Organics	790	26	NWTPH-Dx	8-28-23	8-28-23	
Lube Oil Range Organics	410	52	NWTPH-Dx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	CAA-SS-SW-0.25-082423					
Laboratory ID:	08-281-03					
Diesel Range Organics	ND	27	NWTPH-Dx	8-28-23	8-29-23	
Lube Oil	220	54	NWTPH-Dx	8-28-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	68	50-150				

Client ID:	CAA-SS-SE-0.25-082423					
Laboratory ID:	08-281-04					
Diesel Range Organics	87	27	NWTPH-Dx	8-28-23	8-31-23	N
Lube Oil	340	54	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				

Client ID:	CAA-SS-DUP-1-082423					
Laboratory ID:	08-281-05					
Diesel Range Organics	ND	27	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	290	53	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				



Date of Report: August 31, 2023
 Samples Submitted: August 24, 2023
 Laboratory Reference: 2308-281
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S2					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-23	8-28-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	70	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-165-02							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				64	64	50-150		



Date of Report: August 31, 2023
Samples Submitted: August 24, 2023
Laboratory Reference: 2308-281
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
CAA-SS-NW-0.25-082423	08-281-01	5	8-28-23
CAA-SS-NE-0.25-082423	08-281-02	4	8-28-23
CAA-SS-SW-0.25-082423	08-281-03	7	8-28-23
CAA-SS-SE-0.25-082423	08-281-04	7	8-28-23
CAA-SS-DUP-1-082423	08-281-05	6	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

1 Facility Information

Facility Name	Former Jorgensen Forge Facility
Address	8531 East Marginal Way South Tukwila, WA 98108
DWMU Name/Identifier	Tote Storage Area
RCRA ID Number	WAD000602813
Facility History, Function, Location and Layout	The Former Jorgensen Forge Facility was in operation by multiple owners from 1942-2017. The facility fabricated and manufactured structural steel, tractor, and road equipment, as well as large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. The facility also processed nickel, titanium, and specialized alloys.
Generator Status	Large Quantity Generator
Reason for Closure	Facility Operations Ceased Operations in 2018
DWMU Closure Date	10/26/2023

2 Dangerous Waste Management Unit Information

Unit Description	The Tote Storage Area was a 90/180-day Dangerous Waste accumulation area located on the west side of the site. The Tote Storage Area was an approximately 800 SF structure with wooden siding and an asphalt slab. The Tote Storage Area stored Dangerous Waste and used oil totes and drums generated from facility maintenance and operations. Based on historical documents and statements from former facility staff, the structure at one time was used to clean and etch product samples prior to laboratory testing. Subsequently, the structure was also known as the "Acid House" or "Etch House" before it was used as a 90/180-day Dangerous Waste accumulation area in the 1990s.
Location	The Tote Storage was located on the west side of the property just south of the Baghouse. Figure 1 of the Final Clean Closure Report shows a vicinity map, and Figure 2 shows the Site Map with locations of the Dangerous Waste Management Units.
Waste Managed at the DWMU	Although the entire history of waste operations at the Tote Storage Area is unknown, based on statements from former facility staff and review of annual reports, the Dangerous Waste accumulated in the Tote Storage Area DWMU was primarily facility maintenance rinsewaters, oils, and investigation derived waste.
Applicable Waste Codes	D007, D008, K061, and TSCA Regulated Waste

Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

3 Closure Performance Standard

WAC 173-303-200(h)

i) All dangerous waste and dangerous waste residues must be removed from the containment system. Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues must be decontaminated or removed.

ii) In addition, such a generator is exempt from all the requirements in WAC 173-303-610 and 173-303-620, except for WAC 173-303-610(2) and (5).

4 Closure Activities

As discussed in the July 2020 interim Clean Closure Report, due to visual staining of the asphalt flooring inside the Tote Storage Area, an attempt to decontaminate the concrete was made using high pressure steam and water sprays. However, subsequent sampling revealed the concrete still exceeded MTCA Method A, Unrestricted, for Diesel Range Organics and PCBs. Consequently, it was written into the Interim Action Workplan that the concrete would be removed, designated, and disposed of off-site, and the underlying soil would be excavated down to applicable cleanup levels (2,000 mg/kg for Diesel Range Organics and 1 mg/kg for PCBs) and confirmation sampling would be conducted in accordance with the IAWP Sampling and Analysis Plan.

In October 2023, the Tote Storage Area DWMU was demolished. Due to PCBs detected in the Tote Storage Area structure paint, concrete, and underlying soil, all the demolition debris and underlying soil were designated as TSCA Remediation Waste (performance based) and was profiled into Chemical Waste Management in Arlington, OR for disposal. The structure and slab were demolished, and the underlying soil was excavated down to a maximum depth of approximately 2 feet below ground surface which resulted in off-site disposal of approximately 98 tons of soil/debris.

Confirmation samples of the underlying soil were collected in the areas shown in Figure TSA-1. All results confirmed that MTCA Method A cleanup levels for Diesel Range Organics and PCBs were achieved. The results are summarized in Table TSA-1. After backfilling the footprint of the Tote Storage Area with approved and tested clean fill (crushed rock), the Tote Storage Area was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5). The Tote Storage Area Photo Log provides additional closure documentation.

All samples were transported to OnSite Environmental of Redmond, WA for laboratory analysis following standard chain of custody procedures. OnSite Environmental is a WA State laboratory accredited in accordance with WAC 173-50. Each sample was analyzed by the following test methods in accordance with the IAWP Sampling and Analysis Plan:

- Diesel Range Organics by NWTPH-Dx
- PCBs by EPA 8082



Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

4 Closure Status

The following closure criteria for the Tote Storage Area DWMU have been met:

- ☒ All Dangerous Waste has been removed from the DWMU and disposed of off-site
- ☒ Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues have been decontaminated or removed.
- ☒ The underlying soil has been sampled and evaluated against MTCA Method A or B unrestricted use exposure assumptions in accordance with WAC 173-303-610(2)(b), and the results indicate the contaminant concentrations are below action levels/cleanup levels.

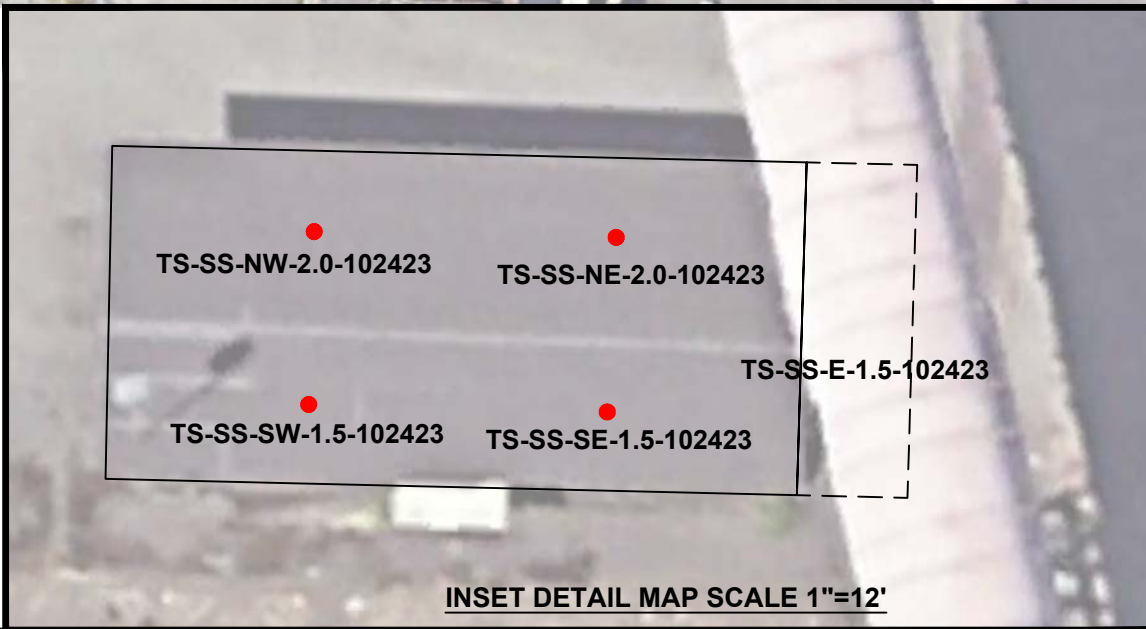
As of 10/26/2023, the Tote Storage Area Clean Closure requirements have been met.

The following attached documents support documentation of the Central Accumulation Area Clean Closure completion status.

- Figure TSA-1
- Table TSA-1
- Tote Storage Area Photo Log
- OnSite Environmental Laboratory Report 2310-277
- Off-site disposal records:

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code	TSCA Status
OR356857	Tote Storage Building Demolition	10/24/2023	57,380.00	023708958JJK	NONE	NONE	PCB Remediation Waste
OR356857	Tote Storage Building Demolition	10/24/2023	57,840.00	023708959JJK	NONE	NONE	PCB Remediation Waste
OR356857	Tote Storage Building Demolition	10/24/2023	44,900.00	023708960JJK	NONE	NONE	PCB Remediation Waste
OR356857	Tote Storage Building Demolition	10/24/2023	35,220.00	023708961JJK	NONE	NONE	PCB Remediation Waste
		Total	195,340	lbs			
			97.67	tons			

Plot Time: 1/26/2024 2:34 PM MOD TIME: 1/26/2024 1:10 PM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge-Formerly Jorgensen\Figures\2024-01\DH 2024-01 Star Forge Tote Storage Bldg.dwg



**TOTE STORAGE AREA
CONFIRMATION
SAMPLING**

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

01-26-2024

Figure
TSA-01

LEGEND

- Tote Storage Area
Confirmation Sample Location



Table TSA-1
Tote Storage Area DWMU Sample Location Data Summary
Former Jorgensen Forge Final Clean Closure Report
Star Forge, LLC

Tote Storage Area						
Sample ID	TS-Dup-1	TS-SS-NW-2.0-102423	TS-SS-NE-2.0-102423	TS-SS-SW-1.5-102423	TS-SS-SE-1.5-102423	TS-SS-E-1.5-102423
Analyte						
Petroleum Hydrocarbons (mg/kg) by NWTPH-Dx						
Diesel Range Organics	33	ND (PQL 27)	430	ND (PQL 26)	ND (PQL 26)	900
Lube Oil Range Organics	ND (PQL 53)	ND (PQL 53)	260	ND (PQL 52)	ND (PQL 52)	560
Polychlorinated Biphenyls (mg/kg) by EPA 8082A	0.063 Total	ND (PQL 0.053)	0.18 Total	ND (PQL 0.052)	ND (PQL 0.052)	0.36 Total
Notes: 1. All samples were below the MTCA Method A Unrestricted cleanup level of 2,000 mg/kg for Diesel Range Organics 2. All samples were below the MTCA Method A Unrestricted cleanup level of 1 mg/kg for Polychlorinated Biphenyls Abbreviations ID = Identification ND = Non-Detect at the PQL NA = Not Analysed PQL = Practical Quantitation Limit Analytical Methods NWTPH-DX and EPA 8082A Analysis by OnSite Environmental, Inc., see lab report # 2308-281						

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Tote Storage Area Photo Log (Page 1)



Photo TSA-01: Facing West, Interior Photo of the CAA
Date Taken: 3/11/2019



Photo TSA-02: Facing Northeast, Active Demolition of the Tote Storage Area
Date Taken: 10/24/2023

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Tote Storage Area Photo Log (Continued – Page 2)



Photo TSA-03: Facing West, Active Confirmation Sampling of Tote Storage Area Subsurface Soil
Date Taken: 8/24/2023

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Tote Storage Area Photo Log (Continued – Page 3)



Photo TSA-04: Facing Waste, Backfilled Footprint of Tote Storage Area
Date Taken: 4/22/2024



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 26, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Tote Storage Area
Laboratory Reference No. 2310-277

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on October 24, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 26, 2023
Samples Submitted: October 24, 2023
Laboratory Reference: 2310-277
Project: Star Forge Tote Storage Area

Case Narrative

Samples were collected on October 24, 2023 and received by the laboratory on October 24, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-Dup-1					
Laboratory ID:	10-277-01					
Diesel Range Organics	33	27	NWTPH-Dx	10-25-23	10-25-23	
Lube Oil Range Organics	ND	53	NWTPH-Dx	10-25-23	10-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

Client ID: TS-SS-NW-2.0-102423

Laboratory ID:	10-277-02					
Diesel Range Organics	ND	27	NWTPH-Dx	10-25-23	10-25-23	
Lube Oil Range Organics	ND	53	NWTPH-Dx	10-25-23	10-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				

Client ID: TS-SS-NE-2.0-102423

Laboratory ID:	10-277-03					
Diesel Range Organics	430	26	NWTPH-Dx	10-25-23	10-25-23	
Lube Oil Range Organics	260	52	NWTPH-Dx	10-25-23	10-25-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				

Client ID: TS-SS-SW-1.5-102423

Laboratory ID:	10-277-04					
Diesel Range Organics	ND	26	NWTPH-Dx	10-25-23	10-25-23	
Lube Oil Range Organics	ND	52	NWTPH-Dx	10-25-23	10-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

Client ID: TS-SS-SE-1.5-102423

Laboratory ID:	10-277-05					
Diesel Range Organics	ND	26	NWTPH-Dx	10-25-23	10-26-23	
Lube Oil Range Organics	ND	52	NWTPH-Dx	10-25-23	10-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

Client ID: TS-SS-E-1.5-102423

Laboratory ID:	10-277-06					
Diesel Range Organics	900	27	NWTPH-Dx	10-25-23	10-26-23	
Lube Oil Range Organics	560	53	NWTPH-Dx	10-25-23	10-26-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	128	50-150				



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1025S1					
Diesel Range Organics	ND	25	NWTPH-Dx	10-25-23	10-25-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-25-23	10-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-239-06							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil	68.0	57.2	NA	NA	NA	17	40	
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				66	72	50-150		



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-Dup-1					
Laboratory ID:	10-277-01					
Aroclor 1016	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	0.063	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.053	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	79	50-127				
Client ID:	TS-SS-NW-2.0-102423					
Laboratory ID:	10-277-02					
Aroclor 1016	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.053	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	85	50-127				
Client ID:	TS-SS-NE-2.0-102423					
Laboratory ID:	10-277-03					
Aroclor 1016	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	0.18	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.052	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	84	50-127				



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: TS-SS-SW-1.5-102423						
Laboratory ID: 10-277-04						
Aroclor 1016	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.052	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 90 50-127</i>						
Client ID: TS-SS-SE-1.5-102423						
Laboratory ID: 10-277-05						
Aroclor 1016	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.052	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.052	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 81 50-127</i>						
Client ID: TS-SS-E-1.5-102423						
Laboratory ID: 10-277-06						
Aroclor 1016	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1221	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1232	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1242	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1248	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1254	0.24	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1260	0.12	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1262	ND	0.053	EPA 8082A	10-25-23	10-26-23	
Aroclor 1268	ND	0.053	EPA 8082A	10-25-23	10-26-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 86 50-127</i>						



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1025S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-25-23	10-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1025S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.427	0.500	0.500	0.500	N/A	85	100	55-119	16	34	
Surrogate:											
DCB						87	99	50-127			



Date of Report: October 26, 2023
 Samples Submitted: October 24, 2023
 Laboratory Reference: 2310-277
 Project: Star Forge Tote Storage Area

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
TS-Dup-1	10-277-01	6	10-25-23
TS-SS-NW-2.0-102423	10-277-02	6	10-25-23
TS-SS-NE-2.0-102423	10-277-03	4	10-25-23
TS-SS-SW-1.5-102423	10-277-04	4	10-25-23
TS-SS-SE-1.5-102423	10-277-05	4	10-25-23
TS-SS-E-1.5-102423	10-277-06	6	10-25-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 82584

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 11/01/2023 Vehicle# R83 Volume
Payment Type Credit Account Container
CWM Load# 500506 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708960JJK
Destination Grid
PO 1
Profile 0R356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	11/01/2023 09:55:47	MANUAL WT	JALTAMI1		Tare
Out	11/01/2023 09:55:47		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each				

Total Tax
Total Ticket

Driver`s Signature

P83

500506

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD0000802813		2. Page 1 of 1	3. Emergency Response Phone 800-337-7455		4. Manifest Tracking Number 023708960 JJK	
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108				Att: Wayne R Turk Generator's Site Address (if different than mailing address)				
Generator's Phone: 206 255-8177				U.S. EPA ID Number WAH000028338				
6. Transporter 1 Company Name R Transport Inc				U.S. EPA ID Number				
7. Transporter 2 Company Name				U.S. EPA ID Number				
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812				U.S. EPA ID Number ORD089452353				
Facility's Phone: 541 454-2643								
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))			10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
				No.	Type			
	1. UN3432, Polychlorinated biphenyls, solid 9, PGII			1	DT	20367 27,00 K		NONE
	2.							
	3.							
4.								
14. Special Handling Instructions and Additional Information 1) Profile# OR358857 Out of Service date: 10/24/23 ERG#171								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Offeror's Printed/Typed Name David Hill				Signature David Hill on behalf of Star Forge LLC		Month Day Year 11/24/23		
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:								
17. Transporter Acknowledgment of Receipt of Materials								
Transporter 1 Printed/Typed Name Timothy Wilsey				Signature Timothy Wilsey		Month Day Year 11/24/23		
Transporter 2 Printed/Typed Name				Signature		Month Day Year		
18. Discrepancy								
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection								
Driver corrected weight New 10-24-23								
18b. Alternate Facility (or Generator)				Manifest Reference Number: U.S. EPA ID Number				
Facility's Phone:								
18c. Signature of Alternate Facility (or Generator)						Month Day Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1. H132			2.			4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name Morgan Hout				Signature Morgan Hout		Month Day Year 11/24/23		

R



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 82585

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 11/01/2023 Vehicle# R78 Volume
Payment Type Credit Account Container
CWM Load# 500507 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708959JJK
Destination Grid
PO 1
Profile 0R356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	11/01/2023 09:56:45	MANUAL WT	JALTAMI1		Tare
Out	11/01/2023 09:56:45		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each				

Total Tax
Total Ticket

Driver`s Signature

278

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD0000602813	2. Page 1 of 1	3. Emergency Response Phone 800-337-7455	4. Manifest Tracking Number 023708959 JJK	
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108 Generator's Phone: 206 255-8177			Generator's Site Address (if different than mailing address) Att: Wayne R Turk			
6. Transporter 1 Company Name R Transport Inc			U.S. EPA ID Number WAH000028338			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812 Facility's Phone: 541 454-2643			U.S. EPA ID Number ORD089452353			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
	1. UN3432, Polychlorinated biphenyls, solid Q, PGI	1	DT	27,000	K	NONE
	2.					
	3.					
4.						
14. Special Handling Instructions and Additional Information 1) Profile# OR358857 Out of Service date: 10/24/23 ERG#171						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeree's Printed/Typed Name David Hill on behalf of Star Forge LLC Signature Month Day Year 10 24 23						
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name David BACACIS Signature Month Day Year 10 24 23 Transporter 2 Printed/Typed Name Signature Month Day Year						
18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number: 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 2. 3. 4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Morgan War Signature Month Day Year 10 24 23						

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

22



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 82588

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 11/01/2023 Vehicle# R82 Volume
Payment Type Credit Account Container
CWM Load# 500510 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708958JJK
Destination Grid
PO 1
Profile 0R356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	11/01/2023 09:59:47	MANUAL WT	JALTAMI1		Tare
Out	11/01/2023 09:59:47		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each				

Total Tax
Total Ticket

Driver`s Signature

282

500510

Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number W A D 0 0 0 8 0 2 8 1 3	2. Page 1 of 1	3. Emergency Response Phone 800-337-7455	4. Manifest Tracking Number 023708958 JJK		
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Generator's Site Address (if different than mailing address) Att: Wayne R Turk					
Generator's Phone: 206 255-8177		U.S. EPA ID Number W A H 0 0 0 0 2 8 3 3 8					
6. Transporter 1 Company Name R Transport Inc		U.S. EPA ID Number					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812		U.S. EPA ID Number O R D 0 8 9 4 5 2 3 5 3					
Facility's Phone: 541 454-2843							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. UN3432, Polychlorinated biphenyls, solid 9, PGII		1 DT		27,000	K	NONE
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1) Profile# OR358857 Out of Service date: 10/24/23 ERG#171							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name David Hill on behalf of Star Forge LLC Signature Month Day Year 11/10/23							
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:							
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Kelly Duheert Signature Month Day Year 11/10/23							
Transporter 2 Printed/Typed Name Signature Month Day Year							
18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number: U.S. EPA ID Number							
18b. Alternate Facility (or Generator) Facility's Phone: U.S. EPA ID Number							
18c. Signature of Alternate Facility (or Generator) Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. 1132 2. 3. 4.							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Morgan Wolf Signature Month Day Year 11/10/23							



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 82762

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	RTRANSPORT R Transport Inc
Ticket Date	11/06/2023	Vehicle#	R81
Payment Type	Credit Account	Container	Volume
CWM Load#	500561	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023708961JJK		
Destination		Grid	
PO	1		
Profile	0R356857 (PCB Remediation Waste: PCB01)		
Generator	OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA		

	Time	Scale	Operator	Inbound	Gross
In	11/06/2023 07:44:09	MANUAL WT	JALTAMI1		Tare
Out	11/06/2023 07:44:09		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each			

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WA D 0 0 0 6 0 2 8 1 3	2. Page 1 of 1	3. Emergency Response Phone 800-337-7455	4. Manifest Tracking Number 023708961 JJK	
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Att: Wayne R Turk Generator's Site Address (if different than mailing address)				
Generator's Phone: 208 255-8177						
6. Transporter 1 Company Name R Transport Inc				U.S. EPA ID Number WA H 0 0 0 0 2 8 3 3 8		
7. Transporter 2 Company Name				U.S. EPA ID Number		
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812				U.S. EPA ID Number OR D 0 8 9 4 5 2 3 5 3		
Facility's Phone: 541 454-2843						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.
	X	1. UN3432, Polychlorinated biphenyls, solid 9, PGII	1	DT	15976 kg 13,000 lb	K
13. Waste Codes NONE						
14. Special Handling Instructions and Additional Information 1) Profile# OR356857 Out of Service date: 10/24/23 ERG#171						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeror's Printed/Typed Name David Hill Signature <i>David J. Hill</i> on behalf of Star Forge LLC Month Day Year 10 24 23						
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Mark Dukart Signature <i>Mark Dukart</i> Month Day Year 10 24 23						
Transporter 2 Printed/Typed Name Signature Month Day Year						
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Driver corrected weight. MW 10-25-23 Manifest Reference Number: U.S. EPA ID Number						
18b. Alternate Facility (or Generator) Month Day Year						
Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H32 2. 3. 4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name Morejank Sar Signature <i>Morejank Sar</i> Month Day Year 10 25 23						

7



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 85489

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 12/08/2023 Vehicle# R83 Volume
Payment Type Credit Account Container
CWM Load# 500506 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708960JJK
Destination Grid
PO OR356857
Profile OR356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	44901 lb*
In	12/08/2023 08:40:18	MANUAL WT	pslider1		Tare	1 lb*
Out	12/08/2023 08:40:18		pslider1		Net	44900 lb
Comments			* Manual Weight		Tons	22.45

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		22.45	Tons	172.10	449.00	\$3863.65	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.21		\$306.94	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$183.52	WA-TUKWILA
5 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA
6 CERT-CERTIFICATE D 100		1.00	Each	35.00		\$35.00	WA-TUKWILA

Total Tax	\$449.00
Total Ticket	\$5013.11

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 85490

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 12/08/2023 Vehicle# R78 Volume
Payment Type Credit Account Container
CWM Load# 500507 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708959JJK
Destination Grid
PO OR356857
Profile OR356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	57841 lb*
In	12/08/2023 08:46:39	MANUAL WT	pslider1		Tare	1 lb*
Out	12/08/2023 08:46:39		pslider1		Net	57840 lb
Comments			* Manual Weight		Tons	28.92

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		28.92	Tons	172.10	578.40	\$4977.13	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.21		\$388.51	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$236.41	WA-TUKWILA
5 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$578.40
Total Ticket	\$6355.45

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 85491

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 12/08/2023 Vehicle# R82 Volume
Payment Type Credit Account Container
CWM Load# 500510 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708958JJK
Destination Grid
PO OR356857
Profile OR356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	57381 lb*
In	12/08/2023 08:51:59	MANUAL WT	pslider1		Tare	1 lb*
Out	12/08/2023 08:51:59		pslider1		Net	57380 lb
Comments			* Manual Weight		Tons	28.69

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		28.69	Tons	172.10	573.80	\$4937.55	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.21		\$385.52	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$234.53	WA-TUKWILA
5 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$573.80
Total Ticket	\$6306.40

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 85493

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 12/08/2023 Vehicle# R81 Volume
Payment Type Credit Account Container
CWM Load# 500561 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708961JJK
Destination Grid
PO OR356857
Profile OR356857 (PCB Remediation Waste: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	
In	12/08/2023 08:58:55	MANUAL WT	pslider1		Tare	35221 lb*
Out	12/08/2023 08:58:55		pslider1		Net	1 lb*
			* Manual Weight		Tons	35220 lb
Comments						17.61

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		17.61	Tons	172.10	352.20	\$3030.68	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.21		\$241.51	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$143.96	WA-TUKWILA
5 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$352.20
Total Ticket	\$3943.35

Driver`s Signature

Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

1 Facility Information

Facility Name	Former Jorgensen Forge Facility
Address	8531 East Marginal Way South Tukwila, WA 98108
DWMU Name/Identifier	Baghouse
RCRA ID Number	WAD000602813
Facility History, Function, Location and Layout	The Former Jorgensen Forge Facility was in operation by multiple owners from 1942-2017. The facility fabricated and manufactured structural steel, tractor, and road equipment, as well as large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. The facility also processed nickel, titanium, and specialized alloys.
Generator Status	Large Quantity Generator
Reason for Closure	Facility Operations Ceased Operations in 2018
DWMU Closure Date	11/21/23

2 Dangerous Waste Management Unit Information

Unit Description	The Baghouse building was primarily a steel structure with an approximately 4,000 SF footprint that housed equipment to capture and contain dust from the Baghouse tunnel that conveyed air and dust from the former melt shop to the Baghouse. The Baghouse processing area and concrete slab were divided by a wall thereby creating two separate areas denoted as 'Baghouse North' and 'Baghouse South' for the purposes of cleaning and sampling. For the purpose of Clean Closure, the Baghouse building, as well as approximately 550 feet of Baghouse duct (also referred to as the "Baghouse tunnel") which was comprised of steel duct, rubber gaskets, and flanges were subject to closure and the Clean Debris Standard as defined in the Alternative Treatment Standards for Hazardous Debris as established in 40 CFR 268.45 and described in Ecology's guidance ¹ . The duct diameter ranged from approximately 2 feet to 12 feet. All Baghouse dust and debris that could not be decontaminated to meet the clean debris standard was designated as a K061 waste stream as it meets the definition of K061 Specific Source Waste from iron and steel sources in accordance with WAC 173-303-9904.
Location	The Baghouse and Baghouse processing area were located north of the west end of the facility and north of the Tote Storage Area. Figure 1 of the Final Clean Closure Report shows a vicinity map, and Figure 2 shows the Site Map with locations of the Dangerous Waste Management Units.
Waste Managed at the DWMU	Although the entire history of waste operations at the Baghouse is unknown, based on statements from former facility staff and review of annual reports, the Dangerous Waste accumulated in the Baghouse DWMU was primarily

¹ Washington State Department of Ecology, *Guidance for Clean Closure of Dangerous Waste Units and Facilities*, Publication No. 94111, Revised May 2005.

Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

	K061 dust and debris which was released from hoppers and placed in bulk containers (such as roll-off boxes) for off-site disposal.
Applicable Waste Codes	K061

3 Closure Performance Standard

WAC 173-303-200(h)

i) All dangerous waste and dangerous waste residues must be removed from the containment system. Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues must be decontaminated or removed.

ii) In addition, such a generator is exempt from all the requirements in WAC 173-303-610 and 173-303-620, except for WAC 173-303-610(2) and (5).

4 Closure Activities

As discussed in the July 2020 interim Clean Closure Report, due to visual staining and suspected contamination of the Baghouse concrete slab, an attempt to decontaminate the concrete was made using high pressure steam and water sprays. However, subsequent sampling revealed the Baghouse North concrete slab still exceeded MTCA Method A, Unrestricted, for Diesel Range Organics and Hexavalent Chromium. Consequently, it was written into the Interim Action Workplan that the concrete would be removed, designated, and disposed of off-site, and the underlying soil would be sampled for Diesel Range Organics and Hexavalent Chromium in accordance with the IAWP Sampling and Analysis Plan to determine if any excavation of underlying soil would be necessary to achieve Clean Closure of this DWMU.

In November 2023, the Baghouse was demolished, and the Baghouse tunnel was cut by lift elevated crews with blowtorches and lowered to the ground using cranes and placed into exclusion zones for inspection and decontamination as described in the IAWP. All materials associated with the Baghouse were visually inspected to determine if the clean debris standards were met. If it was determined that the clean debris standards were not met, the ducting and other materials were decontaminated by a combination of “wet wiping”, scraping, and the use of a vacuum with HEPA filters. All media generated from removing the residual dust inside the duct was managed as K061 Hazardous Waste. The decontamination of the Baghouse media, along with disposal of materials that could not be reasonably decontaminated resulted in generation and disposal of approximately 106 tons of K061 Debris that was placed in 20-yard roll-off bins and shipped via rail Chemical Waste Management in Arlington, OR for macroencapsulation and disposal. In addition, approximately 282 gallons (2,350 lbs) of K061 designated water was generated from decontamination efforts.

As a conservative approach, prior to sampling the subsurface of the Baghouse slab, the top 6 inches of soil was “scraped” from the underlying soil from Baghouse slab footprint. Upon collection of samples of the underlying Baghouse North area, the soil Diesel Range Organics and Hexavalent Chromium concentrations were found to be below MTCA Method A unrestricted levels. After backfilling the footprint of the Baghouse with approved and tested clean fill (crushed rock), the Baghouse was determined to have met all Clean Closure standards in accordance with WAC 173-303-610(2) and (5). Figure BH-1 shows the confirmation sample locations and Table BH-1 provides the summary table of the confirmation results. The Baghouse Photo Log provides additional closure documentation.

Dangerous Waste Management Unit Closure Documentation Form

Dangerous Waste Generators

All samples were transported to OnSite Environmental of Redmond, WA for laboratory analysis following standard chain of custody procedures. OnSite Environmental is a WA State laboratory accredited in accordance with WAC 173-50. Each sample area was analyzed by the following test methods in accordance with the IAWP Sampling and Analysis Plan:

- Diesel Range Organics by NWTPH-Dx
- Hexavalent Chromium by EPA 7196A

4 Closure Status

The following closure criteria for the Baghouse DWMU have been met:

- ☒ All Dangerous Waste has been removed from the DWMU and disposed of off-site
- ☒ Remaining containers, liners, base, and soil containing or contaminated with dangerous waste or dangerous waste residues have been decontaminated or removed.
- ☒ The underlying soil has been sampled and evaluated against MTCA Method A or B unrestricted use exposure assumptions in accordance with WAC 173-303-610(2)(b), and the results indicate the contaminant concentrations are below action levels/cleanup levels.

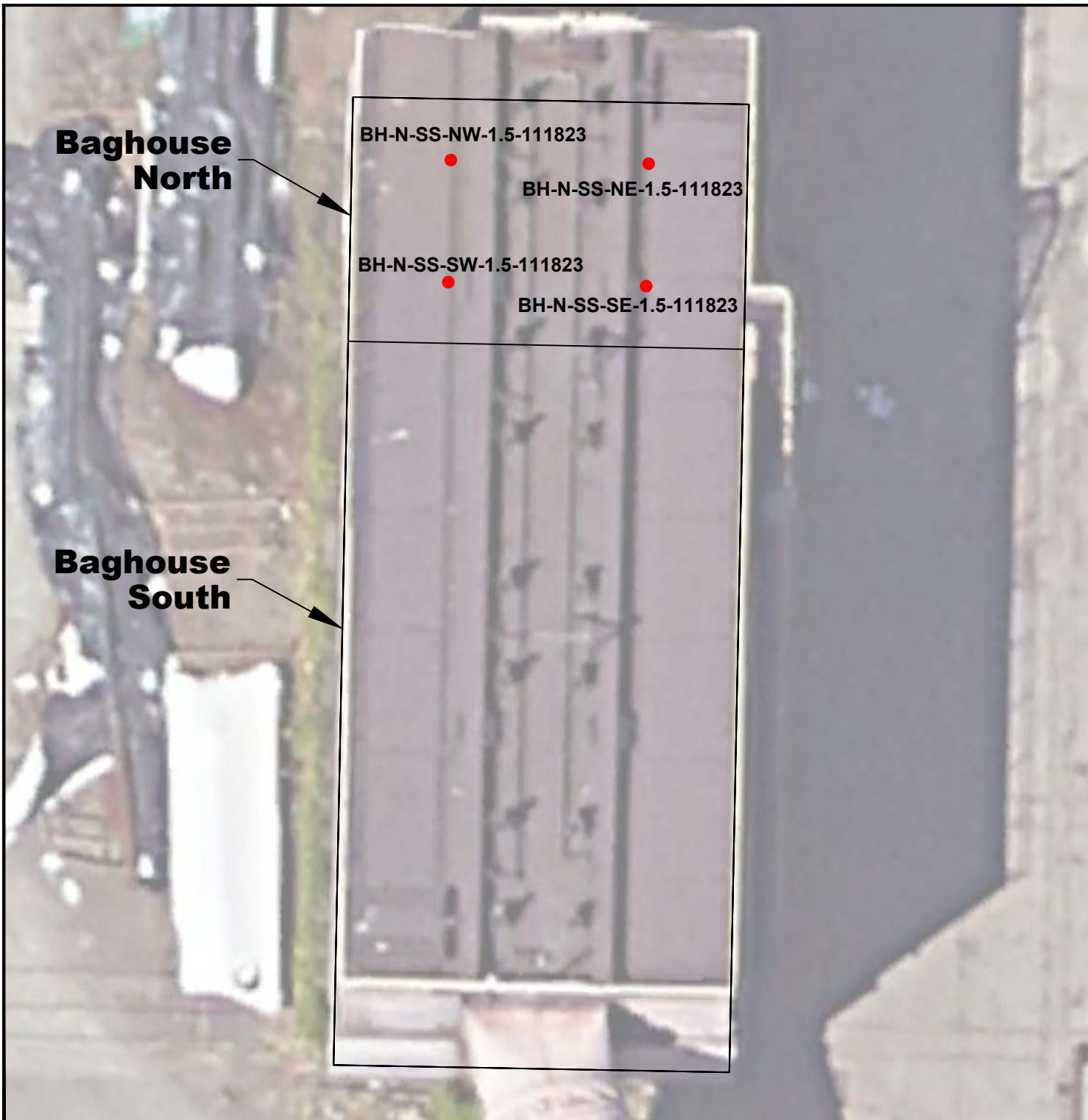
As of 11/21/2023, the Baghouse DWMU Clean Closure requirements have been met.

The following attached documents support documentation of the Baghouse Clean Closure completion status.

- Figure BH-1
- Table BH-1
- Baghouse Photo Log
- OnSite Environmental Laboratory Report 2311-212
- Off-site disposal records from IAWP related Clean Closure efforts:

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code	TSCA
OR356547	K061 Debris	10/25/2023	5,400	023708963JJK	K061	NA	NA
OR356547	K061 Debris	11/21/2023	41,860	023708972JJK	K061	NA	NA
OR356547	K061 Debris	11/21/2023	38,900	023708973JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	47,320	023708986JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	7,480	023708987JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	28,940	023708988JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	9,320	023708989JJK	K061	NA	NA
OR356547	K061 Debris	12/07/2023	31,880	023709000JJK	K061	NA	NA
OR357562	K061 decon water	12/18/2023	2,200	025895530JJK	K061	NA	NA
OR357562	K061 decon water	12/18/2023	150	025895530JJK	K061	NA	NA
		Total	213,450	lbs			
			106.73	tons			

PLOT TIME: 1/26/2024 2:34 PM MOD TIME: 1/26/2024 12:19 PM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge-Formerly Jorgensen\Figures\2024-01\DH 2024-01 Star Forge Baghouse.dwg



**Baghouse North Sample
Location Map**

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

01-12-2024

Figure
BH-1

LEGEND

- Clean Closure Confirmation
Sample Location



Table BH-1
Baghouse DWMU Sample Location Data Summary
Former Jorgnensen Forge Final Clean Closure Report
Star Forge, LLC

Baghouse					
Sample ID	BH-N-Dup-1	BH-N-SS-NW- 1.5-111823	BH-N-SS-NE- 1.5-111823	BH-N-SS-SW- 1.5-111823	BH-N-SS-SE- 1.5-111823
Analyte					
Petroleum Hydrocarbons (mg/kg) by NWTPH-Dx					
Diesel Range Organics	ND (PQL 58)	ND (PQL 29)	ND (PQL 29)	ND (PQL 43)	ND (PQL 58)
Lube Oil Range Organics	570	180	210	430	570
Hexavalent Chromium by EPA 7196A	ND (PQL 1.1)	2.8	ND (PQL 1.1)	1.4	ND (PQL 1.1)
Notes: 1. All samples were below the MTCA Method A Unrestricted cleanup level of 2,000 mg/kg for Diesel Range Organics 2. All samples were below the MTCA Method A Unrestricted cleanup level of 19 mg/kg for Hexavalent Chromium Abbreviations ID = Identification ND = Non-Detect at the PQL NA = Not Analysed PQL = Practical Quantitation Limit Analytical Methods NWTPH-DX and EPA 7196A Analysis by OnSite Environmental, Inc., see lab report # 2311-212					

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 1)



Photo BH-01: Facing Southwest, Google Earth Aerial Image, August, 22nd, 2022

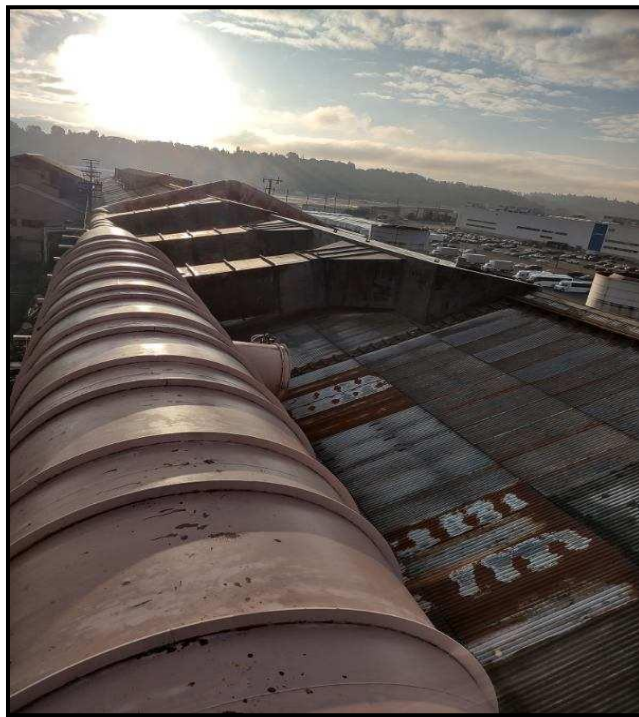


Photo BH-02: Facing East, Rooftop Image of Baghouse Tunnel Pre-Demolition
Photo Taken: 9/5/2023

**Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 2)**



Photo BH-03: Facing Southwest, Active Removal and Lowering of the Baghouse Tunnel
Photo Taken: 9/22/2023

**Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 3)**



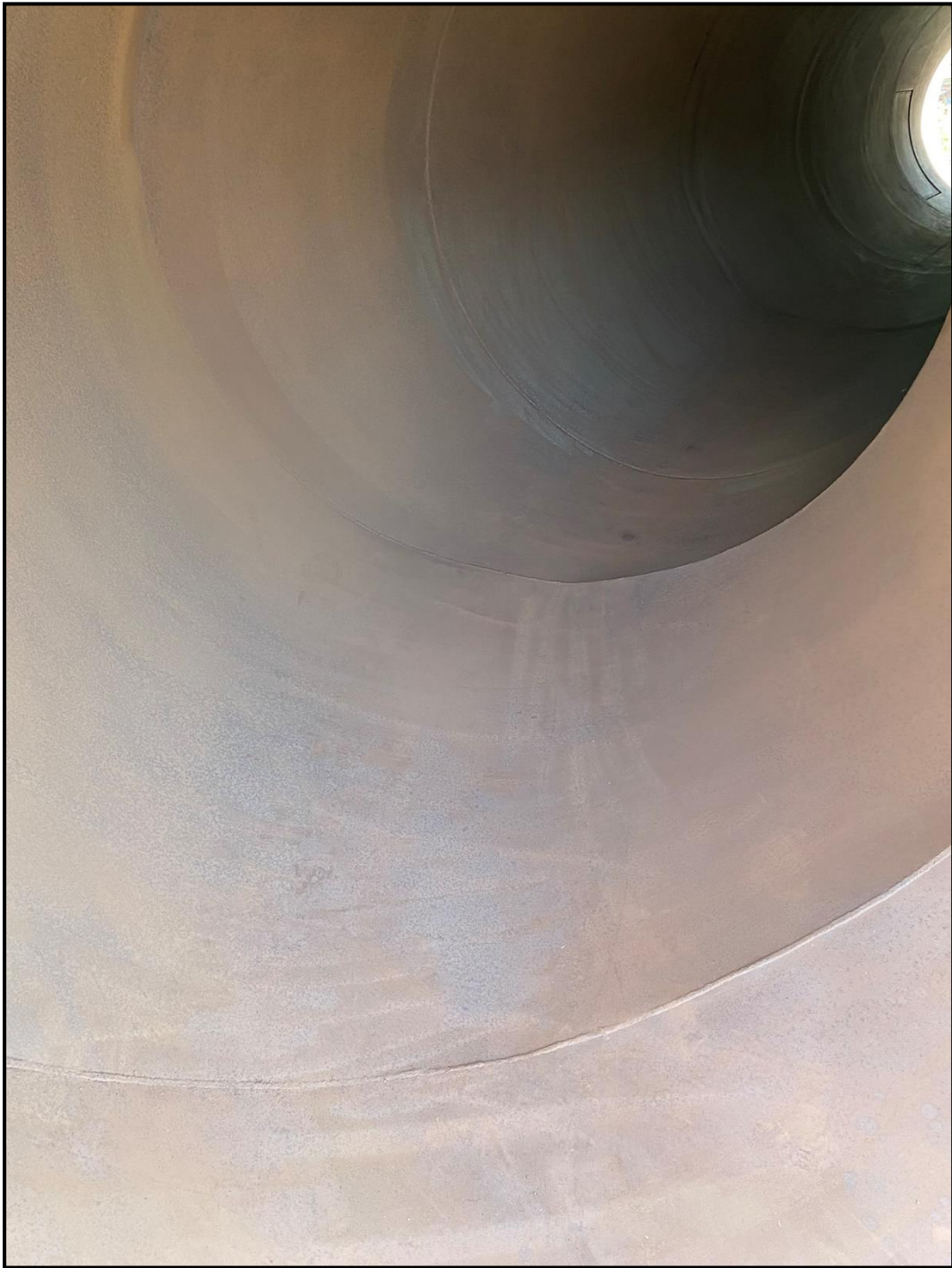
Photo BH-04: Example of Residual Baghouse Dust in the Duct Interior Requiring Removal
Photo Taken: 9/21/2023

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 4)



Photo BH-05: Active Scraping and Vacuum Removal of Baghouse Dust in the Duct Interior
Photo Taken: 9/22/2023

**Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 5)**



**Photo BH-06: Example of Decontaminated Baghouse Duct Inspected and Cleared for Meeting Clean Debris Standard
Photo Taken: 9/20/2023**

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 7)



**Photo BH-07: Facing East, Active Demolition of Baghouse
Structure Photo Taken: 11/10/2023**

Dangerous Waste Management Unit Closure Documentation
Former Jorgensen Forge Facility
Baghouse Photo Log (Page 8)



Photo BH-08: Facing North, Footprint of Baghouse North After Slab Removal
Photo Taken: 11/22/2023



Photo BH-09: Facing West, Backfilled Footprint of Baghouse North Post Demolition
Photo Taken: 4/22/2024



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 5, 2024

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Baghouse North
Laboratory Reference No. 2311-212

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on November 20, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 5, 2024
Samples Submitted: November 20, 2023
Laboratory Reference: 2311-212
Project: Star Forge Baghouse North

Case Narrative

Samples were collected on November 18, 2023 and received by the laboratory on November 20, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: January 5, 2024
 Samples Submitted: November 20, 2023
 Laboratory Reference: 2311-212
 Project: Star Forge Baghouse North

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SS-NW-1.5-111823					
Laboratory ID:	11-212-01					
Diesel Range Organics	ND	29	NWTPH-Dx	11-20-23	11-20-23	U1
Lube Oil	180	56	NWTPH-Dx	11-20-23	11-20-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

Client ID:	BH-N-SS-NE-1.5-111823					
Laboratory ID:	11-212-02					
Diesel Range Organics	ND	29	NWTPH-Dx	11-20-23	11-21-23	U1
Lube Oil	210	55	NWTPH-Dx	11-20-23	11-21-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				

Client ID:	BH-N-SS-SW-1.5-111823					
Laboratory ID:	11-212-03					
Diesel Range Organics	ND	29	NWTPH-Dx	11-20-23	11-20-23	
Lube Oil	140	58	NWTPH-Dx	11-20-23	11-20-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	BH-N-SS-SE-1.5-111823					
Laboratory ID:	11-212-04					
Diesel Range Organics	ND	43	NWTPH-Dx	11-20-23	11-21-23	U1
Lube Oil	430	57	NWTPH-Dx	11-20-23	11-21-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	71	50-150				

Client ID:	BH-N-Dup-1					
Laboratory ID:	11-212-05					
Diesel Range Organics	ND	58	NWTPH-Dx	11-20-23	11-21-23	U1
Lube Oil	570	56	NWTPH-Dx	11-20-23	11-21-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				



Date of Report: January 5, 2024
 Samples Submitted: November 20, 2023
 Laboratory Reference: 2311-212
 Project: Star Forge Baghouse North

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-23	11-20-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-23	11-20-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	11-212-01									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	U1,
Lube Oil	155	152	NA	NA		NA	NA	2	40	
Surrogate:										
o-Terphenyl						78	88	50-150		



Date of Report: January 5, 2024
 Samples Submitted: November 20, 2023
 Laboratory Reference: 2311-212
 Project: Star Forge Baghouse North

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-N-SS-NW-1.5-111823						
Laboratory ID: 11-212-01						
Hexavalent Chromium	2.8	1.1	EPA 7196A mod.	11-20-23	11-20-23	
Client ID: BH-N-SS-NE-1.5-111823						
Laboratory ID: 11-212-02						
Hexavalent Chromium	ND	1.1	EPA 7196A mod.	11-20-23	11-20-23	
Client ID: BH-N-SS-SW-1.5-111823						
Laboratory ID: 11-212-03						
Hexavalent Chromium	1.4	1.2	EPA 7196A mod.	11-20-23	11-20-23	
Client ID: BH-N-SS-SE-1.5-111823						
Laboratory ID: 11-212-04						
Hexavalent Chromium	ND	1.1	EPA 7196A mod.	11-20-23	11-20-23	
Client ID: BH-N-Dup-1						
Laboratory ID: 11-212-05						
Hexavalent Chromium	ND	1.1	EPA 7196A mod.	11-20-23	11-20-23	



Date of Report: January 5, 2024
 Samples Submitted: November 20, 2023
 Laboratory Reference: 2311-212
 Project: Star Forge Baghouse North

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1120S1					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	11-20-23	11-20-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	11-113-03							
	ORIG	DUP						
Hexavalent Chromium	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	11-113-03									
	MS	MSD	MS	MSD		MS	MSD			
Hexavalent Chromium	4.66	4.91	5.00	5.00	ND	93	98	75-125	5	20

SPIKE BLANK

Laboratory ID:	SB1120S1									
	SB		SB			SB				
Hexavalent Chromium	4.89		5.00		NA	98		80-120	NA	NA



Date of Report: January 5, 2024
Samples Submitted: November 20, 2023
Laboratory Reference: 2311-212
Project: Star Forge Baghouse North

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
BH-N-SS-NW-1.5-111823	11-212-01	11	11-20-23
BH-N-SS-NE-1.5-111823	11-212-02	9	11-20-23
BH-N-SS-SW-1.5-111823	11-212-03	13	11-20-23
BH-N-SS-SE-1.5-111823	11-212-04	12	11-20-23
BH-N-Dup-1	11-212-05	11	11-20-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





**Onsite
Environmental Inc.**

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: **DH Environmental**

Project Number:

Project Name:

Project Manager:

Sampled by:

N. Moxley

Lab ID

Sample Identification

Date Sampled

Time Sampled

Matrix

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX (8021 ☐ 8260 ☐

NWTPH-Gx

NWTPH-Dx (SG Clean-up ☐

Volatiles 8260

Halogenated Volatiles 8260

EDB EPA 8011 (Waters Only)

Semivolatiles 8270/SIM
(with low-level PAHs)

PAHs 8270/SIM (low-level)

PCBs 8082

Organochlorine Pesticides 8081

Organophosphorus Pesticides 8270/SIM

Chlorinated Acid Herbicides 8151

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664

Hex Chrome

% Moisture

Turnaround Request
(in working days)

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Days

☐ 3 Days

☐ Standard (7 Days)

☒ Fastest Available
(other)

Laboratory Number:

11-212

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021 ☐ 8260 ☐	NWTPH-Gx	NWTPH-Dx (SG Clean-up ☐	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Hex Chrome	% Moisture
1	BH-N-SS-NW-1.5-111823	11/18/23	0900	Soil	1				X															X
2	BH-N-SS-NE-1.5-111823		0910																					X
3	BH-N-SS-SW-1.5-111823		0920																					X
4	BH-N-SS-SE-1.5-111823		0930																					X
5	BH-N-Dup-1		0940																					X

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Signature

Company

Date

Time

Comments/Special Instructions

Received

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Signature

Company

Date

Time

Comments/Special Instructions

Received

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Signature

Company

Date

Time

Comments/Special Instructions

Received

Signature

Company

Date

Time

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Reviewed/Date

Reviewed/Date

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

0.802



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 83819

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 11/16/2023 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 500851 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708963JJK
Destination Grid
PO 1
Profile 0R356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	11/16/2023 12:01:27	MANUAL WT	JALTAMI1		Tare
Out	11/16/2023 12:01:27		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each				

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WA0000602813	1	800-337-7455	023708963 JJK	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 3531 E Marginal Way S Seattle WA 98108		Att: James Robertson				
Generator's Phone:						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WA0000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
UPRE		NED001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812		TC 11-7-23				
Facility's Phone:						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
	1. NA3077, Hazardous waste, solid, n.o.s. (K061 Debris) 9, PGIII	01	CM	5400 4 mwo 11-7-23	P I	K061
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1) (T) Profile# OR350547 ERG#171 CAN# 8711 5400r						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offor's Printed/Typed Name		Signature		Month Day Year		
David Hill		David Hill of Star Forge		10/25/23		
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month Day Year		
Albert Coofor		Albert Coofor		10/25/23		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
Heather Moto		H Moto		10/25/23		
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Weight correction per David Hill/President mwo 11-7-23						
18b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)		Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month Day Year		
Morgan Wolf		Morgan Wolf		11/03/23		

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY COPY

IF YOU RECEIVED THIS MANIFEST, YOU HAVE RESPONSIBILITIES UNDER THE e-MANIFEST ACT. SEE INSTRUCTIONS ON REVERSE SIDE.

TC

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD0001602813	22. Page 2-2	23. Manifest Tracking Number 0237089123 JJK				
24. Generator's Name Star Forge LLC								
25. Transporter 3 Company Name PCC		U.S. EPA ID Number OR0000041180						
26. Transporter _____ Company Name		U.S. EPA ID Number						
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
		No.	Type					
32. Special Handling Instructions and Additional Information								
TRANSPORTER	33. Transporter 3 Acknowledgment of Receipt of Materials							
	Printed/Typed Name		Signature			Month	Day	Year
TRANSPORTER	34. Transporter _____ Acknowledgment of Receipt of Materials							
	Printed/Typed Name		Signature			Month	Day	Year
DESIGNATED FACILITY	35. Discrepancy							
	36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 85374

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 12/06/2023 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 500851 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708963JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	5400 lb*
In	12/06/2023 12:34:36	MANUAL WT	pslider1		Tare	
Out	12/06/2023 12:34:36		pslider1		Net	5400 lb
Comments			* Manual Weight		Tons	2.70

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Each CYB 100		20.00	Each	265.00	81.00	\$5300.00	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.21		\$543.04	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA 100		1.00	Each	785.00		\$785.00	WA-TUKWILA
5 LINER EA-LINER PER 100		1.00	Each	75.00		\$75.00	WA-TUKWILA
6 RENT DAILY-RENT PE 100		27.00	Each	20.00		\$540.00	WA-TUKWILA
7 CONT PICKUP-CONTAI 100		1.00	Each	520.00		\$520.00	WA-TUKWILA
8 WWM-WASTE WATER MA 100			%	4.75		\$251.75	WA-TUKWILA
9 CERT-CERTIFICATE D 100		1.00	Each	35.00		\$35.00	WA-TUKWILA

Total Tax	\$81.00
Total Ticket	\$8155.79

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87108

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	WATCO PALUOSE & COULEE CITY
Ticket Date	01/08/2024	Vehicle#	RAIL
Payment Type	Credit Account	Container	Volume
CWM Load#	502021	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023708987JJJ		
Destination		Grid	
PO	1		
Profile	0R356547 (K061 DEBRIS)		
Generator	OR-STAR FORGE LLC 8531	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	01/08/2024 08:37:06	MANUAL WT	JALTAMI1		Tare
Out	01/08/2024 08:37:06		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each	0.00		

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

12/10 502021 502021

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD0000602813	2	800-337-7455	023708987 JJK	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Att: James Robertson				
Generator's Phone: 206-785-7875						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
Union Pacific Railroad		NEB001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17629 CEDAR SPRINGS LANE ARLINGTON OR 97812		ORD089452353				
Facility's Phone: 541-454-2843						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. NA3077, Hazardous waste, solid, n.o.s. (K081 Debris) 9, PGIII	01	CM	4	T	K081
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1)(T) Profile# OR358547 ERG#171						
Container WMXV 8698 7480 P.						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeror's Printed/Typed Name		Signature		Month	Day	Year
Nathan Moxley on behalf of Star Forge		[Signature]		12	7	23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Chris Blum		[Signature]		12	7	23
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
Alisona Lenius		[Signature]		12	7	23
18. Discrepancy						
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Manifest Reference Number: _____ U.S. EPA ID Number: _____						
18b. Alternate Facility (or Generator)						
Facility's Phone: _____						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132 2. 3. 4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Morgan Wolf		[Signature]		12	18	23

BMS

Please print or type.

502021

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD000602813	22. Page 2	23. Manifest Tracking Number 023708987JJK		
24. Generator's Name Star Forge						
25. Transporter 3 Company Name pce			U.S. EPA ID Number ORQ00004U80			
26. Transporter _____ Company Name			U.S. EPA ID Number			
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		No.	Type			
32. Special Handling Instructions and Additional Information						
TRANSPORTER	33. Transporter 3 Acknowledgment of Receipt of Materials					
	Printed/Typed Name		Signature		Month	Day Year
TRANSPORTER	34. Transporter Acknowledgment of Receipt of Materials					
	Printed/Typed Name		Signature		Month	Day Year
DESIGNATED FACILITY	35. Discrepancy					
	36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87692

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 01/18/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502020 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708989JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

In	Time	Scale	Operator	Inbound	Gross	9320 lb*
01/18/2024	10:16:05	MANUAL WT	pslider1		Tare	
Out	01/18/2024	10:16:05	pslider1		Net	9320 lb
			* Manual Weight		Tons	4.66

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya	100	20.00	Yards	291.06	93.20	\$5821.20	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.71		\$548.72	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA	100	1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER	100	1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE	100	20.00	Each	25.00		\$500.00	WA-TUKWILA
7 CONT PICKUP-CONTAI	100	1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA	100		%	4.75		\$276.51	WA-TUKWILA

Total Tax \$93.20
Total Ticket \$8819.63

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87693

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 01/18/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502021 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708987JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	7480 lb*
In	01/18/2024 10:25:00	MANUAL WT	pslider1		Tare	
Out	01/18/2024 10:25:00		pslider1		Net	7480 lb
Comments			* Manual Weight		Tons	3.74

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya 100		20.00	Yards	291.06	74.80	\$5821.20	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	6.71		\$588.98	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA 100		1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER 100		1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE 100		44.00	Each	25.00		\$1100.00	WA-TUKWILA
7 CONT PICKUP-CONTAI 100		1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA 100			%	4.75		\$276.51	WA-TUKWILA

Total Tax	\$74.80
Total Ticket	\$9441.49

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87694

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 01/18/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502211 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708973JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	38900 lb*
In	01/18/2024 10:30:11	MANUAL WT	pslider1		Tare	
Out	01/18/2024 10:30:11		pslider1		Net	38900 lb
Comments			* Manual Weight		Tons	19.45

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya 100		25.00	Yards	291.06	389.00	\$7276.50	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	6.71		\$625.85	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA 100		1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER 100		1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE 100		5.00	Each	25.00		\$125.00	WA-TUKWILA
7 CONT PICKUP-CONTAI 100		1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA 100			%	4.75		\$345.63	WA-TUKWILA

Total Tax	\$389.00
Total Ticket	\$10341.98

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87695

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 01/18/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502212 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708972JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

In	Time	Scale	Operator	Inbound	Gross	41860 lb*
01/18/2024	10:34:42	MANUAL WT	pslider1		Tare	
Out	01/18/2024	10:34:42	pslider1		Net	41860 lb
			* Manual Weight		Tons	20.93

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya	100	25.00	Yards	291.06	418.60	\$7276.50	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.71		\$625.85	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA	100	1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER	100	1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE	100	5.00	Each	25.00		\$125.00	WA-TUKWILA
7 CONT PICKUP-CONTAI	100	1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA	100		%	4.75		\$345.63	WA-TUKWILA

Total Tax	\$418.60
Total Ticket	\$10371.58

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87708

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 01/18/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502237 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023709000JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

In	Time	Scale	Operator	Inbound	Gross	31880 lb*
01/18/2024	14:31:33	MANUAL WT	pslider1		Tare	
Out	01/18/2024	14:31:33	pslider1		Net	31880 lb
			* Manual Weight		Tons	15.94

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya	100	25.00	Yards	291.06	318.80	\$7276.50	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.71		\$666.11	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA	100	1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER	100	1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE	100	29.00	Each	25.00		\$725.00	WA-TUKWILA
7 WWM-WASTE WATER MA	100		%	4.75		\$345.63	WA-TUKWILA
8 CONT PICKUP-CONTAI	100	1.00	Each	635.00		\$635.00	WA-TUKWILA

Total Tax	\$318.80
Total Ticket	\$10912.04

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88028

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	WATCO PALUOSE & COULEE CITY
Ticket Date	01/23/2024	Vehicle#	RAIL
Payment Type	Credit Account	Container	Volume
CWM Load#	502212	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023708972JJK		
Destination		Grid	
PO	OR356547		
Profile	OR356547 (K061 DEBRIS)		
Generator	OR-STAR FORGE LLC 8531	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	01/23/2024 09:20:10	MANUAL WT	JALTAMI1		Tare
Out	01/23/2024 09:20:10		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each	0.00		

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD000602813	2	800-337-7455	023708972 JJK	
5. Generator's Name and Mailing Address		Att: James Robertson				
Star Forge LLC DBA Jorgensen Forge		Generator's Site Address (if different than mailing address)				
8531 E Marginal Way S						
Seattle WA 98108						
Generator's Phone: 206 785-7875						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
UPRR		NEED001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC		ORD089452353				
17629 CEDAR SPRINGS LANE						
ARLINGTON OR 97812						
Facility's Phone: 541 454-2643						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. NA3077, Hazardous waste, solid, n.o.s. (K081 Debris)			21		K081
	9. PGIII	1	cm	10	T	Per David Hill IPE
	2.					040121/24/23
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1)(T) Profile# OR358547 ERG#171						
CAN# 8955						
41860P.						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name		Signature		Month	Day	Year
Nathan Moxley on behalf of Star Forge		[Signature]		11	21	23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Albert Coulter		[Signature]		11	21	23
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
Haecker mab		[Signature]		11	21	23
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Permission to change weight Per David Hill IPE 040121/24/23						
18b. Alternate Facility (or Generator)		Manifest Reference Number:		U.S. EPA ID Number		
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)		Month		Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Dawn Dune		[Signature]		12	26	23

BMS

502212

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD000602813	22. Page 2	23. Manifest Tracking Number 023708972 SK				
24. Generator's Name STAR Forge LLC RMS 1-4-24								
25. Transporter 3 Company Name PCL			U.S. EPA ID Number 02000041180					
26. Transporter _____ Company Name			U.S. EPA ID Number					
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
		No.	Type					
32. Special Handling Instructions and Additional Information								
33. Transporter 3 Acknowledgment of Receipt of Materials								
Printed/Typed Name			Signature			Month	Day	Year
34. Transporter _____ Acknowledgment of Receipt of Materials								
Printed/Typed Name			Signature			Month	Day	Year
35. Discrepancy								
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88029

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	WATCO PALUOSE & COULEE CITY
Ticket Date	01/23/2024	Vehicle#	RAIL
Payment Type	Credit Account	Container	Volume
CWM Load#	502237	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023709000JJK		
Destination		Grid	
PO	OR356547		
Profile	OR356547 (K061 DEBRIS)		
Generator	OR-STAR FORGE LLC 8531	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	01/23/2024 09:21:35	MANUAL WT	JALTAMI1		Tare
Out	01/23/2024 09:21:35		JALTAMI1		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each	0.00		

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD000602813	2	800-337-7455	023709000 JJK	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Att: James Robertson				
Generator's Phone: 206 796 7875						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
UPRR		NED001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number		ems 1-4-24		
CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812		ORD0089452353				
Facility's Phone: 541 454-2643						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3077, Hazardous waste, solid, n.o.s. (K081 Debris) 9. PGIII	01	CM	4	T	K081
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1(T) Profile# OR356547 ERG#171 WmXu 8866 31880P.						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offor's Printed/Typed Name		Signature		Month	Day	Year
Nathan Moxley on behalf of Star Forge				12	7	23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit:				
Transporter signature (for exports only):		Date leaving U.S.:				
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Jason Edwards				12	7	23
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
Alisha Lenius				12	7	23
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Permission to change weight per David Hill, PE. DWO 12/26/23						
18b. Alternate Facility (or Generator)		Manifest Reference Number:		U.S. EPA ID Number		
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)				Month	Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.	2.	3.	4.			
H132						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Dawn Dink				12	26	23

BMS

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD000602813	22. Page 2	23. Manifest Tracking Number 023709000 JJK			
24. Generator's Name STAR FORGE LLC							
25. Transporter 3 Company Name PCL				U.S. EPA ID Number 00000041180			
26. Transporter _____ Company Name				U.S. EPA ID Number			
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
		No.	Type				
32. Special Handling Instructions and Additional Information							
TRANSPORTER	33. Transporter 3 Acknowledgment of Receipt of Materials						
	Printed/Typed Name		Signature		Month	Day	Year
TRANSPORTER	34. Transporter _____ Acknowledgment of Receipt of Materials						
	Printed/Typed Name		Signature		Month	Day	Year
DESIGNATED FACILITY	35. Discrepancy						
DESIGNATED FACILITY	36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88844

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 02/14/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502693 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708986JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

In	Time	Scale	Operator	Inbound	Gross	47320 lb*
02/14/2024	08:36:43	MANUAL WT	pslider1		Tare	
Out	02/14/2024	08:36:43	pslider1		Net	47320 lb
			* Manual Weight		Tons	23.66

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya	100	40.00	Yards	291.06	473.20	\$11642.40	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	7.24		\$1035.35	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA	100	1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER	100	1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE	100	21.00	Each	25.00		\$525.00	WA-TUKWILA
7 CONT PICKUP-CONTAI	100	1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA	100		%	4.75		\$553.01	WA-TUKWILA

Total Tax	\$473.20
Total Ticket	\$15808.96

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 89202

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	PC PC LOGISTICS GROUP INC
Ticket Date	02/20/2024	Vehicle#	RAIL
Payment Type	Credit Account	Container	Volume
CWM Load#	502020	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023708989JJK		
Destination		Grid	
PO	OR356547		
Profile	OR356547 (K061 DEBRIS)		
Generator	OR-STAR FORGE LLC 8531	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	02/20/2024 08:04:31	MANUAL WT	aalvalos		Tare
Out	02/20/2024 08:04:31		aalvalos		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each	0.00		

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved: OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD000602813	2	800-337-7455	023708989 JJK	
5. Generator's Name and Mailing Address		Att: James Robertson				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Generator's Site Address (if different than mailing address)				
Generator's Phone: 206-785-7875						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
Union Pacific Railroad		NEB001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812						
Facility's Phone: 541-454-2843		ORD089452353				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. NA3077, Hazardous waste, solid, n.o.s. (K081 Debris) 9, PGIII	01	CM	5 4 11/1-4-24	T	K081
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1)(T) Profile# OR358547 ERG#171						
9320P. Container # WMXV 8693						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeror's Printed/Typed Name		Signature		Month	Day	Year
Nathan Moxley on behalf of Star Forge		[Signature]		12	7	23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Chris Blum		[Signature]		12	7	23
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
Alisha Lenius		[Signature]		12	7	23
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Weight correction per David Hill/Principal 11/1-4-24						
18b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)		Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.		2.		3.		4.
H132						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Morgan Wolf		[Signature]		12	18	23

oms

502020

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD000602813	22. Page 2	23. Manifest Tracking Number 023708989JJK				
24. Generator's Name Star Forge								
25. Transporter <u>3</u> Company Name <u>PCE</u>				U.S. EPA ID Number DRQ000041180				
26. Transporter _____ Company Name _____				U.S. EPA ID Number _____				
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
		No.	Type					
32. Special Handling Instructions and Additional Information								
TRANSPORTER	33. Transporter <u>3</u> Acknowledgment of Receipt of Materials							
	Printed/Typed Name		Signature			Month	Day	Year
TRANSPORTER	34. Transporter _____ Acknowledgment of Receipt of Materials							
	Printed/Typed Name		Signature			Month	Day	Year
DESIGNATED FACILITY	35. Discrepancy							
DESIGNATED FACILITY	36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 89297

Customer Name	CONSTRUCTION GROUP INTERNATIO	Carrier	WATCO PALUOSE & COULEE CITY
Ticket Date	02/21/2024	Vehicle#	RAIL
Payment Type	Credit Account	Container	Volume
CWM Load#	502211	Driver	
Hauling Ticket#		Check#	
Route		Billing #	0000255
State Waste Code		Gen EPA ID	
Manifest	023708973JJK		
Destination		Grid	
PO	OR356547		
Profile	OR356547 (K061 DEBRIS)		
Generator	OR-STAR FORGE LLC 8531	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	02/21/2024 06:09:24	MANUAL WT	aalvalos		Tare
Out	02/21/2024 06:09:24		aalvalos		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	MANIFEST TRACKING-	100	1.00	Each	0.00		

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

502211 12/17

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD0000602813	2. Page 1 of 2	3. Emergency Response Phone 800-337-7455	4. Manifest Tracking Number 023708973 JJK	
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108 Generator's Phone: 206 785-7875 Att: James Robertson Generator's Site Address (if different than mailing address)						
6. Transporter 1 Company Name R Transport Inc			U.S. EPA ID Number WAH000028338			
7. Transporter 2 Company Name BNSF WPRR DWO 12/21/23			U.S. EPA ID Number NE0001792910 HND04634788			
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812 Facility's Phone: 541 454-2643 U.S. EPA ID Number ORD089452353						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3077, Hazardous waste, solid, n.o.s. (K061 Debris) 9, PGIII	1 CM		19 to	T	K061 Per David Hill PE DWO 12/26/23
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information 1)(T) Profile# OR355547 ERG#171 Can WMXU 8904 38900P.						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offor's Printed/Typed Name Nathan Moxley on behalf of Star Forge				Signature [Signature]		Month Day Year 11 21 23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Albert Corffor				Signature [Signature]		Month Day Year 11 21 23
Transporter 2 Printed/Typed Name Alisha Lenius				Signature [Signature]		Month Day Year 11 21 23
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Permission to change weight Per David Hill PE DWO 12/26/23						
18b. Alternate Facility (or Generator)						U.S. EPA ID Number
Facility's Phone:						Month Day Year
18c. Signature of Alternate Facility (or Generator)						Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name Dawn Dulp				Signature [Signature]		Month Day Year 12 26 23

BMS

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 90082

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 02/27/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 502693 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708986JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	02/27/2024 07:34:39	MANUAL WT	aalvalos		Tare
Out	02/27/2024 07:34:39		aalvalos		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each	0.00			

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD000602813	2	800-337-7455	023708986 JJK	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Att: James Robertson				
Generator's Phone: 206-785-7975						
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
Union Pacific Railroad		NEB001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17629 CEDAR SPRINGS LANE ARLINGTON OR 97812		ORD089452353				
Facility's Phone: 541-454-2843						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. NA3077, Hazardous waste, solid, n.o.s. (K081 Debris) 9, PGIII	01	CM	24 4 MW 1-17-24	T	K081
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1)(T) Profile# OR356547 ERG#171 WMXU 8699 47320P						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name		Signature		Month	Day	Year
Nathan Moxley on behalf of Star Forge				12	7	23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Jason Edmonds				12	7	23
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
Alisha Lenius				12	7	23
18. Discrepancy						
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Weight correction per David Hill/pres. 01-17-24						
18b. Alternate Facility (or Generator)		Manifest Reference Number:		U.S. EPA ID Number		
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)				Month	Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Noreen Wolf				10	15	24

BMS

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number SD 2693 WAD000602813	22. Page 2	23. Manifest Tracking Number 023708986JJK		
24. Generator's Name STAR FORGE LLC						
25. Transporter 3 Company Name PCL			U.S. EPA ID Number 082000041180			
26. Transporter _____ Company Name			U.S. EPA ID Number			
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
32. Special Handling Instructions and Additional Information						
33. Transporter 3 Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
34. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 90768

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/01/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 503488 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708988JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross
In	03/01/2024 08:33:59	MANUAL WT	aalvalos		Tare
Out	03/01/2024 08:33:59		aalvalos		Net
					Tons

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 MANIFEST TRACKING-	100	1.00	Each	0.00			

Total Tax
Total Ticket

Driver`s Signature

Please print or type.

503488

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number		
		WAD0000602813	2	800-337-7455	023708988 JJK		
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)					
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Att: James Robertson					
Generator's Phone: 206-785-7875							
6. Transporter 1 Company Name		U.S. EPA ID Number					
R Transport Inc		WAH0000028338					
7. Transporter 2 Company Name		U.S. EPA ID Number					
Union Pacific Railroad		NED001792910					
8. Designated Facility Name and Site Address		U.S. EPA ID Number					
CHEMICAL WASTE MANAGEMENT, INC 17629 CEDAR SPRINGS LANE ARLINGTON OR 97812		ORD089452353					
Facility's Phone: 541-454-2843							
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
			No.	Type			
	X	1. NA3077, Hazardous waste, solid, n.o.s. (K061 Debris) 9, PGIII	01	cm	14	+	K061
		2.			mw		
					2.26.24		
14. Special Handling Instructions and Additional Information							
1(T) Profile# OR358547 ERG#171 Container # 28940p wmxu 8924							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name		Signature		Month	Day	Year	
Nathan Moxley on behalf of Star Forge				12	7	23	
INT'L	16. International Shipments		Port of entry/exit:				
	☐ Import to U.S. ☐ Export from U.S.		Date leaving U.S.:				
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials						
	Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
	Chris Blum				12	7	23
	Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
	Alisha Lenius				12	7	23
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space						
	☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
	Weight Correction per David Hill/CHMM mxy 2-26-24						
	18b. Alternate Facility (or Generator) U.S. EPA ID Number						
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)							
Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H132 2. 3. 4.							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name		Signature		Month	Day	Year	
Morgan Wolf				12	10	24	

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

BMS

Please print or type.

503488

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number	22. Page	23. Manifest Tracking Number		
		WA0000602813	2	023708988JJK		
24. Generator's Name						
Star Forge LLC						
25. Transporter 3 Company Name		U.S. EPA ID Number				
PCC		OR0000041180				
26. Transporter Company Name		U.S. EPA ID Number				
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		No.	Type			
32. Special Handling Instructions and Additional Information						
33. Transporter 3 Acknowledgment of Receipt of Materials						
Printed/Typed Name		Signature		Month	Day	Year
34. Transporter Acknowledgment of Receipt of Materials						
Printed/Typed Name		Signature		Month	Day	Year
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 91968

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/15/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 503488 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 023708988JJK
Destination Grid
PO OR356547
Profile OR356547 (K061 DEBRIS)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	28940 lb*
In	03/15/2024 09:24:13	MANUAL WT	pslider1		Tare	
Out	03/15/2024 09:24:13		pslider1		Net	28940 lb
Comments			* Manual Weight		Tons	14.47

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 RCRA Macr-Cubic Ya 100		25.00	Yards	291.06	289.40	\$7276.50	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	6.96		\$677.01	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 RAIL EA-RAIL EA 100		1.00	Each	835.00		\$835.00	WA-TUKWILA
5 LINER EA-LINER PER 100		1.00	Each	85.00		\$85.00	WA-TUKWILA
6 RENT DAILY-RENT PE 100		21.00	Each	25.00		\$525.00	WA-TUKWILA
7 CONT PICKUP-CONTAI 100		1.00	Each	635.00		\$635.00	WA-TUKWILA
8 WWM-WASTE WATER MA 100			%	4.75		\$345.63	WA-TUKWILA

Total Tax	\$289.40
Total Ticket	\$10693.54

Driver`s Signature



TurboWaste - SAW Production
Version: 3.0.33
7/20/2022 12:00:00 AM

Contact:
TurboWaste@ecy.wa.gov
(800) 874-2022

DHENV Logout | Data Entry Staff

[Back To History](#)

STAR FORGE LLC DBA JORGENSEN FORGE

WAD000602813
FS ID: 2382

8531 E MARGINAL WAY S
SEATTLE , WA 98108

AR 2023

General Information

Received Date 4/8/2024

1. Reason for Submittal

N - Annual Report

Effective Date: 12/31/2023

2. Site ID

EPA Id: WAD000602813

Activity Location: WA

3. Site Name

Name: STAR FORGE LLC DBA JORGENSEN FORGE

4. Site Location

8531 E MARGINAL WAY S ,SEATTLE WA 98108

Latitude 47.526520 **Longitude:** -122.303090

KING County, UNITED STATES

Use Lat/Long as primary address: ☐

State District: NWRO**5. Site Mailing Address**

8531 E MARGINAL WAY S ,SEATTLE WA 98108 UNITED STATES

6. Site Land Type

Private

7. North American Industry Classification System (NAICS)

332111 - IRON AND STEEL FORGING

8. Site Contact Person

Wayne R Turk - Project Administrator

wturk@jorgensenforge.com 206 255-8177

8a. Site Contact Address8531 E. Marginal Way S. ,Seattle WA 98108-4018 UNITED STATES
206 255-8177**9a. Legal Owner**

Type	Name	Address	Phone	Date
Private	STAR FORGE LLC DBA JORGENSEN FORGE	8531 E MARGINAL WAY S , SEATTLE WA 98108	(206)762-1100	3/27/1992

9b. Land Owner

Type	Name	Address	Phone	Date
Private	Star Forge LLC dba Jorgensen Forge	8531 E MARGINAL WAY S , SEATTLE WA 98108	(206)255-8177	3/16/2018

9c. Site Operator

Type	Name	Address	Phone	Date
Private	Star Forge LLC dba Jorgensen Forge	8531 E. MARGINAL WAY S. , SEATTLE WA 98108	(206)255-8177	3/27/1992

10. Type of Federal Regulated Waste Activity

10a. Dangerous Waste Activities

1. State Generator Category

LQG

2. Federal Generator Category

LQG

3. Short Term Generator

(This question is automatically reported as “no” to U.S. Environmental Protection Agency).

☐ **4. United States Importer of Dangerous Waste**
☐ **5. Mixed Waste (Dangerous and radioactive) Generator**
6. Transporter of Dangerous Waste
☐ a. HW Transporter

☐ b. HW Transfer Facility

☐ **7. Designated Facility of Dangerous Waste (TSD)**

(Requires an Ecology Part A or Part B permit for dangerous waste

8. Recycler of Dangerous Waste
☐ a. Stores Prior to Recycling

☐ b. Does Not Store Prior to Recycling
9. Exempt Boiler and / or Industrial Furnace
☐ a. Small Quantity On-site Burner Exemption

☐ b. Smelting, Melting, Refining Furnace Exemption

☐ **10. Underground Injection Control**

(Requires a registered underground injection well. See WAC 173-218).

☐ **11. Receives Dangerous Waste from Off-site**
12. Recognized Trader
☐ a. Importer ☐ b. Exporter
13. Importer/Exporter of Spent Lead Acid Batteries (SLABs)
☐ a. Importer ☐ b. Exporter

management).

10b. Universal Waste Activities

1. Large Quantity Handler of Universal Waste

☐ a. Batteries ☐ b. Lamps ☐ c. Mercury containing equipment

(Large quantity handlers accumulate 11,000 pounds or more total of universal waste (batteries, thermostats, and lamps calculated collectively) and/or accumulates more than maintain your LQHUW status through the end of the calendar year.)

(Between 2,200 and 10,999 lbs of universal waste lamps at any time in the calendar year. If you collected more than 10,999 pounds, select the box in 10b1b)

☐ 3. Destination Facility for Universal Waste

10c. Used Oil Activities

1. Off-Specification Used Oil Burner

- ☐ a. Utility Boiler
☐ b. Industrial boiler
☐ c. Industrial furnace

2. Used Oil Processor and/or Re-refiner - Indicate types of activities.

- ☐ a. Processor
☐ b. Re-refiner

3. Used Oil Transporter - Indicate types of activities.

- ☐ a. Transporter
☐ b. Transfer Facility

4. Used Oil Fuel Marketer - Indicate types of activities.

- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

10d. Eligible Academic Entities with Laboratories

1. Yes, I am managing dangerous wastes under this rule.

- ☐ a. College or University
☐ b. Teaching Hospital that is owned by (or has a formal written affiliation agreement with) a college or university.
☐ c. Non-profit institute that is owned by (or has a formal written affiliation agreement with) a college or university.

☐ **Yes, I wish to withdraw from this rule. (If you were managing dangerous wastes under the State Academic Laboratory Rule and you no longer wish to participate, select this option.)**

10e. State Required Information. The following information is required by Washington State.

1. Washington State Tax Registration Number (UBI number): 813682678

2. How Frequently do you generate dangerous waste?

☐ a. Monthly ☒ b. Batch ☐ c. Spill Event ☐ d. Clean-Up

☐ **3. Generator of Special Waste (Regulated under WAC 173-303-073)**

☐ **4. Recycler of On-Site Waste (i.e. on-site use, reuse, or reclamation of a waste after it was generated)**

☐ **5. Permit-by-Rule (PBR)**

☐ **6. Treatment by Generator (TBG)**

☐ **7. Transport your own waste**

8. Dangerous Waste Fuel Activity

☐ a. Generator of dangerous waste fuel

☐ b. Generator marketing to burner

☐ c. Other marketers (i.e. blender, distributor etc)

d. Burner (indicate type of combustion unit)

☐ 1. Utility boiler ☐ 2. Industrial Boiler ☐ 3. Industrial Furnace

11. Federal Waste Codes

D002,D008,K061

12. State Waste Codes

WSC2,WT02

13. Episodic Generator

No Episodic Waste Exists

14. LQG Receiving Waste for Consolidation

☐ Are you an LQG notifying of consolidating SQG Hazardous Waste Under the Control of the Same Person following to WAC 173-303-171(1)(e)(IX)

15. Notification of LQG Site Closure for a Central Accumulation Unit (CAU) (optional) OR Entire Facility

☒ LQG Site Closure of a Central Accumulation Unit (CAU) or Entire Facility. WAC 173-303-200(12)

Closure Type	Expected Closure Date	Requesting New Closure Date	Date Closed	Meets Compliance Standards
--------------	-----------------------	-----------------------------	-------------	----------------------------

Entire Facility		No
Entire Facility	8/31/2021	Yes
Entire Facility	12/31/2024	No

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ A. Are you notifying under WAC 173-303-017(8) that you will begin managing, are managing, or will stop managing hazardous secondary material under WAC 173-303-017(5)?

No HSM Activity reported

17. Manifest Broker

☐ Are you a Manifest Broker?

18. Pharmaceutical Activities

If you manage dangerous waste under the Pharmaceutical Requirements WAC 173-303-555, indicate the facility type in question a. If these requirements no longer apply, check the box in question b to withdraw.

I am managing dangerous wastes under the requirements as a:

- ☐ Healthcare facility
- ☐ Reverse distributor

☐ I wish to withdraw from this rule.

Note: If you are a Reverse Distributor, you may only withdraw from these requirements if you are also withdrawing your EPA/State Id number.

19. Comments

Waste is generated from activities related to site demolition and closure. Final clean closure will be complete in 2024. Amended Clean Closure was completed on individual Dangerous waste management units on the dates listed: CAA – 8/31/2023; Tote Storage Area – 10/26/2023; Baghouse – 11/21/2023.

20. Certification

Title	First Name	Last Name
Project Administrator	Wayne	Turk
Email	Certification Date	
wturk@jorgensenforge.com	4/8/2024	

Close

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 1			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR356878 (Optional)					
A-2. Lead Paint Chips					
A-3. D008			A-4.		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G15	
A-8. W406		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____				[X] No ☐ Yes	

B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H132	950		
See GM Addendum B3 for Shipments Sent Page number 1					
B-4. <u>950</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Debris contaminated with lead paint chips from demolition of buildings associated with site closure.					

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 2			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR356547 (Optional)					
A-2. K061 Debris					
A-3. K061			A-4.		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G15	
A-8. W319		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____				☒ No ☐ Yes	

B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H132	211100		
See GM Addendum B3 for Shipments Sent Page number 2					
B-4. <u>211100</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Baghouse dust generated from demolition of baghouse system associated with Clean Closure and site closure.					

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 3			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR357533 (Optional)					
A-2. Lead Contaminated Debris					
A-3. D008			A-4.		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G15	
A-8. W002		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____				[X] No ☐ Yes	

B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H141	37120		0
ORD089452353		H132	197020		
See GM Addendum B3 for Shipments Sent Page number 3					
B-4. <u>234140</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Waste generated during demolition of building for site closure.					

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 4			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR357535 (Optional)					
A-2. Calcium Oxide					
A-3.			A-4. WSC2 ,WT02		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G32	
A-8. W319		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____ _____				☒ No ☐ Yes	
B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H132	189380		
See GM Addendum B3 for Shipments Sent Page number 4					
B-4. <u>189380</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Calcium Oxide and debris generated during site demolition and facility closure.					

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 5			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR357562 (Optional)					
A-2. K061 Decon Water					
A-3. K061			A-4.		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G15	
A-8. W101		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____ _____				☒ No ☐ Yes	
B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H132	2350		
See GM Addendum B3 for Shipments Sent Page number 5					
B-4. <u>2350</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Water contaminated with baghouse dust generated from demolition of baghouse system associated with Clean Closure and facility closure.					

Generation and Management Form				GM	
Please enter your US EPA/State ID Number and your site name in the small box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Then complete one answer sheet for each waste stream. Reference the instructions on pages 29 through 36 as you complete this form. Please type or print legibly in blue or black ink.			Please Enter: Your US EPA/State Id: <u>WAD000602813</u> Site Name: <u>STAR FORGE LLC DBA JORGENSEN FORGE</u>		
Page Number: 6			For Ecology Use Only: _____		
A. Description of Dangerous Waste Stream					
Where was this waste stream managed? ☒ Off-Site ☐ On-Site					
A-1. OR357669 (Optional)					
A-2. Calcium Oxide Decon Water					
A-3. D002			A-4.		
A-5. ☐ EHW ☒ DW		A-6. ☒ No ☐ Yes		A-7. G32	
A-8. W101		A-9. ☐ i ☒ ii ☐ iii ☐ iv ☐ v ☐ vi		A-10. ☒ No ☐ Yes	
		A-9.a.			
A-11. ☒ No ☐ Yes			A-12.		
B. Waste Management Activities					
B-1. To be completed by Generators, TSD and Recyclers- Additional space is available on the continuation sheet					
B-2. Enter waste managed On-Site				B-2.a. Was waste managed according to the treatment-by-generator guidance?	
_____				[X] No ☐ Yes	

B-3. Enter Off-site summary					
Designated Facility (TSDR)		Management Code	Quantity		Recycling Percent
ORD089452353		H134	4000		
See GM Addendum B3 for Shipments Sent Page number 6					
B-4. <u>4000</u> ☐ Tons ☒ Pounds ☐ Kilograms ☐ Gallons (If gallons, answer B-4.a.)					
B-4.a. _____ ☐ Lbs/gal ☐ Specific Gravity					
C. Comments					
Water generated during decontamination of equipment during demolition associated with facility closure.					

Generation Management					Addendum B3	
Page Num	Date Shipped (mm/dd/ yyyy)	Manifest Document Number	Internal Tracking Code	Designated Facility Number	Quantity Shipped	Management Code
1	10/20/2023	023708954JJK		ORD089452353	950	H132
2	10/25/2023	023708963JJK		ORD089452353	5400	H132
2	11/21/2023	023708973JJK		ORD089452353	38900	H132
2	11/21/2023	023708972JJK		ORD089452353	41860	H132
2	12/07/2023	023708986JJK		ORD089452353	47320	H132
2	12/07/2023	023708987JJK		ORD089452353	7480	H132
2	12/07/2023	023709000JJK		ORD089452353	31880	H132
2	12/07/2023	023708989JJK		ORD089452353	9320	H132
2	12/07/2023	023708988JJK		ORD089452353	28940	H132
3	12/14/2023	025895501JJK		ORD089452353	37120	H141
3	12/14/2023	025895506JJK		ORD089452353	48980	H132
3	12/14/2023	025895507JJK		ORD089452353	35540	H132
3	12/14/2023	025895505JJK		ORD089452353	36880	H132
3	12/14/2023	025895502JJK		ORD089452353	50840	H132
3	12/15/2023	025895508JJK		ORD089452353	24780	H132
4	12/14/2023	025895513JJK		ORD089452353	19100	H132
4	12/14/2023	025895516JJK		ORD089452353	30220	H132
4	12/14/2023	025895514JJK		ORD089452353	12180	H132
4	12/14/2023	025895519JJK		ORD089452353	19110	H132
4	12/14/2023	025895518JJK		ORD089452353	26000	H132
4	12/14/2023	025895517JJK		ORD089452353	32890	H132
4	12/14/2023	025895515JJK		ORD089452353	31600	H132
4	12/14/2023	025895512JJK		ORD089452353	18280	H132
5	12/18/2023	025895530JJK		ORD089452353	2350	H132
6	12/11/2023	023708907JJK		ORD089452353	4000	H134



1011 SW KLICKITAT WAY
SUITE 107
SEATTLE, WASHINGTON 98134
(206) 939-0886

SPILL / RELEASE REPORT FORM

FILE NAME:
Star Forge Lime Release Report 11-22-23.

LOCATION OF SPILL/RELEASE:

8531 E Marginal Way S
Tukwila, WA 98108

DATE OF SPILL/RELEASE:
11/22/2023

ESTIMATED TIME OF SPILL/RELEASE:

12:30 PM

WA STATE ERTS #
726905

REPORT PREPARED BY:

David Hill, PE, CHMM
Principal – DH Environmental, Inc.
Phone: (206) 293-3126
Email: davehill@dhenviro.com

MATERIAL(S) RELEASE:

Lime (calcium hydroxide / calcium oxide
ratio unknown)

**ESTIMATED QUANTITY OF
SPILL/RELEASE:**

500 lbs

AGENCIES NOTIFIED:

- WA State Emergency Management Division
- WA State Department of Ecology
- National Response Center

SITE CONTACT:

James Robertson
Star Forge, LLC
Phone: (281) 785-7875

WEATHER:

No Rain, Moderate Northerly Wind
(heading directly south)

WATER BODY IMPACTED:

None

SUMMARY OF INJURIES OR EXPOSURES: No injuries or exposures were reported as a result of the release.

Summary of Spill/Release Incident

The former Jorgensen Forge facility located at 8531 E. Marginal Way S. in Tukwila, WA is currently undergoing permitted demolition of all structures on the property. The site is currently under an Agreed Order between the Washington State Department of Ecology and the current property owner (Star Forge, LLC) for a MTCA Interim Action Cleanup (Cleanup Site ID 3689). The site is also under an Agreed Order between the WA State Department of Ecology and a former owner (Earle M. Jorgensen Company) for a MTCA Remedial Investigation and Feasibility Study. The property was used from 1942 to 2018 to manufacture structural steel, tractor and road equipment, and large-scale metal parts for the aircraft and marine industries. The demolition contractor is Construction Group International (CGI). DH Environmental, Inc. is contracted with Star Forge to provide environmental compliance oversight for the Interim Action work.

On the southwest side of the site, there is an elevated storage hopper approximately 25 feet above ground (see attached map showing the approximate vessel location) containing lime. This hopper was enclosed inside a structure and elevated, so it was not apparent to anyone that it contained any materials. This area of the facility, referred to as the "melt shop," ceased operation in 2015, prior to Star Forge's ownership of the facility. The on-site presence of this lime was unknown to all parties.

On Wednesday 11/22/2023 at approximately 12:30 PM, the lime hopper was breached as CGI was cutting into the structure for demolition. The breach resulted in an estimated 500-lbs of lime falling from the vessel onto the ground. Due to the northerly wind direction and location of the hopper being approximately 150 feet from the south property line, some of the lime crossed over onto Boeing's property adjacent to the south. We do not believe that the lime impacted the Duwamish River because the wind was blowing directly south. The wind was light to moderate at the time of the release.

All catch basins in the area of demolition were blocked prior to the incident occurring as a stormwater Best Management Practice. In addition, all stormwater drainage at the facility is treated and batched tested before discharging the Lower Duwamish under two Administrative Orders with the WA State Department of Ecology.

No injuries or exposures were reported because of this release. Lime is not highly toxic, but it is an irritant to skin, eyes, gastrointestinal tracts, and respiratory tracts. The lime designated as Dangerous Waste in accordance with the WA State Dangerous Waste regulations because when mixed with an equal weight of water, the pH exceeded 12.5. This testing was conducted on-site by DH Environmental with a pH meter. WA state has a State-Only Dangerous Waste designation of WSC2 for corrosive solids. Due to this release qualifying as a "Dangerous Waste Release", the WA State Emergency Management Division (1-800-258-5990) was notified in addition to the National Response Center (1-800-424-8802). These notifications were made from approximately 1:30 – 2:30PM. Beau Johnson, the Ecology Site Manager, was also notified, in addition to the Boeing EHS manager for the property to the south. Because Boeing's

ATTACHMENTS:

- ☒ Site Photos ☐ Sketch ☐ Chain of Custody ☐ Other:
☐ Sample Log ☒ Drawing(s) ☐ Calibration Records

property is a military operations facility, we were not allowed to take any action on Boeing's property due to their security protocol. The Boeing EHS representative informed us that they blocked their stormwater conveyance lines in the area and planned to bring out a spill response contractor to recover the spilled lime from their property.

Actions taken on-site to contain the release:

- CGI used a boom lift to raise an employee near the breach and "plugged" it with sheet metal and adhesive foam to stop further release and dispersion of lime from the source (see Photo – 01)
- The lime on the ground on the Star Forge property was scraped (by CGI) into a pile with equipment and covered with plastic sheeting/visqueen (see photo 02).
- The area was demarcated with Danger Tape.

The lime in the source hopper is currently contained and lime on the ground has been consolidated and covered with plastic pending disposal.

Due to the height of the hopper and potential structural risks, the remaining lime (estimated 10-15 tons) could not be immediately removed as specialized equipment is required to be deployed. As of the date of this report, Star Forge and its contractors and consultants are assessing all options for safe removal of the lime to avoid further release and dispersion.

Photos:



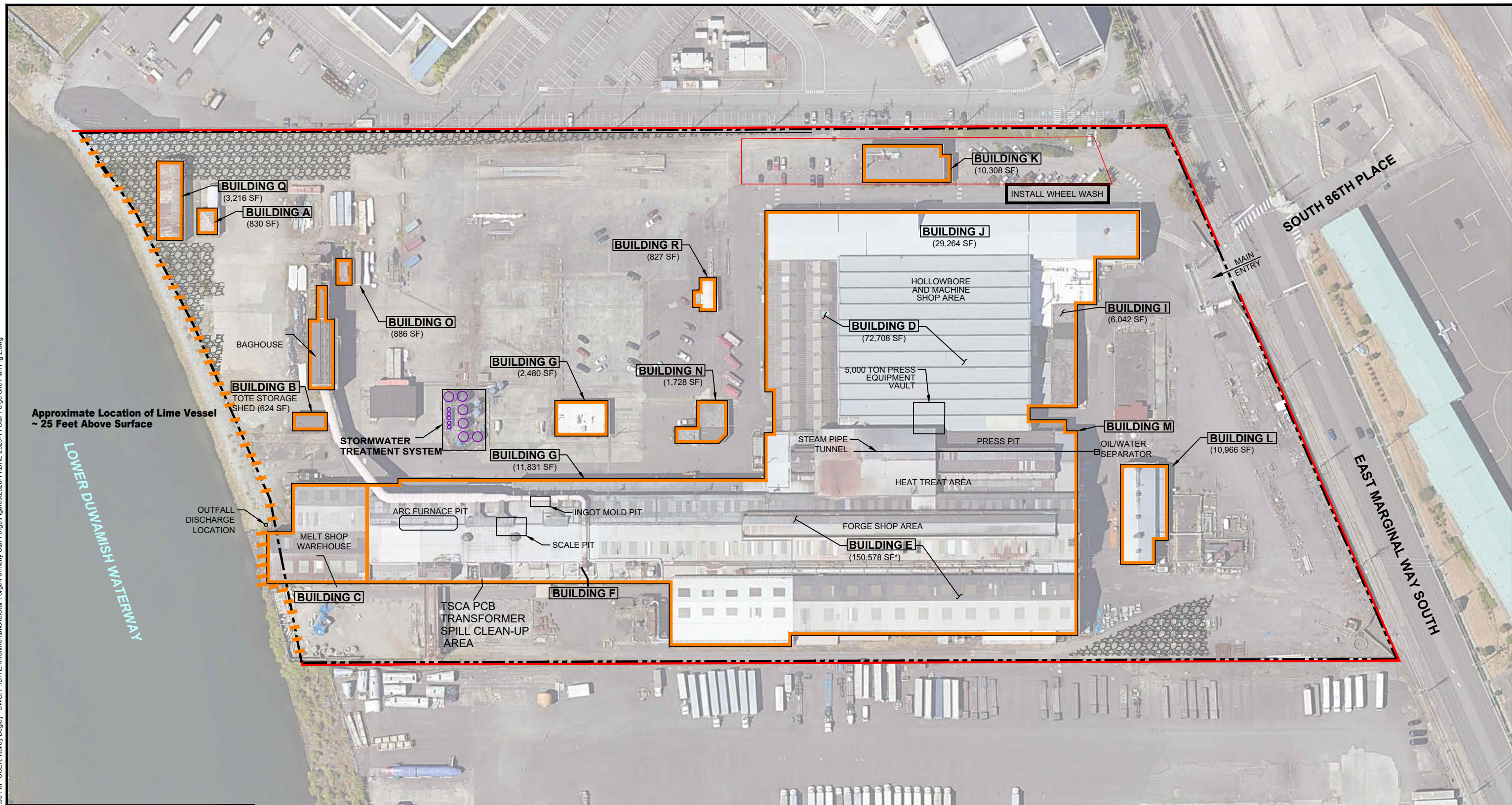
Photo 01

Facing East, Lime Vessel Breach "Plug" with Sheet Metal and Adhesive Foam, 11/22/2023



Photo 02

Facing East, Surface Impacted Lime Contained and Covered, 11/22/2023



SOURCE: GOOGLE EARTH PRO AERIAL MAY 26, 2018.



Demolition Plan Site Map and Sequencing Plan

Star Forge
8531 East Marginal Way South
Tukwila, Washington

11/19/2020

Stacy Fox

Figure
1

PHASES



PHASE 1

PHASE 2

PHASE 3

PHASE 4

PHASE 5

LEGEND



PROPERTY BOUNDARY

BUILDING OUTLINE

EXISTING CONCRETE BERM OR SPRAY
APPLIED, RIGID POLYURETHANE FOAM
WATER-TIGHT BERM

INSTALL PRIVACY FENCE



GRAVEL SURFACE

SE

SQUARE FEET



COMBINED SF OF
BUILDINGS E AND F

HAY BALE BARRIER



APPROXIMATE SCALE IN FEET



Dangerous Waste Clean Closure Report

Former Jorgensen Forge Site
RCRA Site ID: WAD000602813

8531 East Marginal Way South
Tukwila, WA 98108

22 July 2020

Prepared for:

Star Forge, LLC
8531 East Marginal Way South
Tukwila, WA 98108

Prepared by:

DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98134

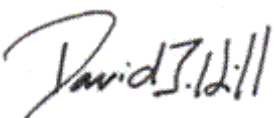
EXECUTIVE SUMMARY

This Dangerous Waste Clean Closure Report has been prepared by DH Environmental, Inc. (“DH Environmental”) for the purpose of documenting the Clean Closure of Dangerous Waste Management Units at the former Jorgensen Forge Facility located at 8531 E Marginal Way S., Tukwila, Washington 98108. This report also presents the waste designation of materials within the buildings which will be demolished at the facility following issuance of a demolition permit by the City of Tukwila.

The facility is subject to Clean Closure because it was a generator of Dangerous Waste and operated Dangerous Waste Management Units throughout its history, which extends back to the 1940s. Star Forge, LLC (“Star Forge”) is the current owner of the property and is conducting this Clean Closure prior to the sale and redevelopment of the property. Earle M. Jorgensen (“EMJ”), a former owner of the facility, bought the plant from the original owner, Isaacson Steel and operated an industrial operation on the site for many years. EMJ is investigating and remediating the legacy contamination on the Property under an Agreed Order it entered into with the Washington State Department of Ecology in 2017.

Star Forge has completed the Clean Closure activities that can be accomplished under the Dangerous Waste Regulations with the buildings still intact, and without interfering with the work being undertaken by EMJ. Final closure of some of the Dangerous Waste Management Units subject to Clean Closure will be accomplished once cleanup levels are established under the site-wide Agreed Order being conducted by EMJ. Star Forge and EMJ are cooperating to make sure that each entity can carry out the work for which it is responsible.

PROJECT INFORMATION

Project Title	Former Jorgensen Forge Clean Closure
Project Location	8531 E Marginal Way S., Tukwila, Washington 98108
Project Owner	Star Forge LLC
Report Delivery Date	22 July 2020
Report Prepared by	 Stacy Fox, CHMM Senior Project Scientist DH Environmental, Inc.  Nathan Moxley, LG, LHG Senior Project Hydrogeologist  David Hill, PE, CHMM, CPEA Principal DH Environmental, Inc.  Expires 01 December 2021

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List of Attachments

Attachment 1:	CAA Designation Package
Attachment 2:	Tote Storage Area Designation Package
Attachment 3:	Baghouse Designation Package
Attachment 4:	Melt Shop / Forge Shop Slag Designation Package
Attachment 5:	Concrete Stockpile Designation Package
Attachment 6:	Underground Storage Tank Liquids, Sand, and Fill Slag Designation Package
Attachment 7:	Area Wide Dust Designation package

Appendices

Appendix 1:	Sampling and Analysis Plan
Appendix 2	Health and Safety Plan

LIST OF ACRONYMS AND ABBREVIATIONS

CAA	Central Accumulation Area
DWMU	Dangerous Waste Management Unit
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
HVOC	Halogenated Organic Compounds
MTCA	Washington State Model Toxics Control Act
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
QA/QC	Quality Assurance / Quality Control
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation / Feasibility Study
SAP	Sampling and Analysis Plan
SVOC	Semivolatile Organic Compounds
TCLP	Toxicity Characteristic Leachate Procedure
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

1.0 OVERVIEW

DH Environmental has prepared this Report on behalf of Star Forge, to document Clean Closure of the former Jorgensen Forge Facility located at 8531 E Marginal Way S., in Tukwila, Washington 98108 (the “Facility”; Figure 2). The purpose of this document is to report the results of work undertaken by Star Forge to carry out Clean Closure of the applicable Dangerous Waste Management Units (“DWMUs”) at the Facility in accordance with WAC 173-303-610(2) and (5). In addition, this report presents the waste designation of materials within the buildings located on the Facility in accordance with WAC 173-303-070.

Star Forge has conducted the required Clean Closure activities that can be accomplished under Washington’s Dangerous Waste regulations with the structures still intact, and without interfering with the work being undertaken by EMJ.

DH Environmental has prepared a Sampling and Analysis Plan (SAP) to describe the sampling and analysis protocols that were followed during sampling at the Facility. These protocols meet the requirements of WAC 173-303-070, the technical requirements of EPA publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Washington State Department of Ecology (Ecology) Publication #97-407, *Chemical Testing Methods for Designating Dangerous Waste (2014)*, and Ecology Publication 94-111, *Guidance for Clean Closure of Dangerous Waste Units and Facilities (2005)*. The SAP is included as Appendix 1. Appendix 2 is the Health and Safety plan developed for the work associated with this report.

1.1 Site Description¹

The former Jorgensen Forge Facility consists of approximately 21.6 acres, located in an industrial area along the east bank of the Lower Duwamish Waterway. The site is bordered to the north by Boeing Plant 2, and to the south by the Boeing Isaacson property. It is bordered to the west by the Lower Duwamish Waterway, and to the east by East Marginal Way South and the King County Regional Airport (“Boeing Field”).

The property was used from 1942-1965 to fabricate structural steel, tractor, and road equipment. Operations at the site included forging and heat-treating operations conducted for the U.S. Navy.

The property was developed first by Isaacson Steel, from 1942-1965. It was owned and operated by Earl M. Jorgenson Co. (“EMJ”) from 1965 until 1992, when it was purchased by Jorgensen Forge Corporation (“JFC”). JFC manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. JFC also processed nickel, titanium, and specialized alloys.

¹ Information in this section was derived from the Washington State Department of Ecology’s Jorgensen Forge Corp. Site Information webpage: <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=3689>

Industrial use by Isaacson, EMJ and JFC since the 1940's has left a legacy soil and groundwater contamination documented in previous studies. Contaminated groundwater may have also migrated onto the property from off-site sources.

Contaminants of concern at the site include:

- Polychlorinated biphenyls (PCBs)
- Volatile organic compounds (VOCs)
- Halogenated volatile organic compounds (HVOCs)
- Metals (including but not limited to arsenic, cadmium, chromium, lead, nickel, copper, and zinc)

1.2 Work Performed by Others

Star Forge purchased the facility in bankruptcy from the estate of JFC on November 28, 2016. It operated the Facility for less than two years before ceasing operations in 2018.

Pursuant to a Settlement Agreement reached in the bankruptcy, EMJ entered into an Agreed Order with Ecology in 2017 to complete a remedial investigation and feasibility study (RI/FS) and conduct remediation under a Cleanup Action Plan to be prepared by Ecology. Since 2017, EMJ has been negotiating a draft Remedial Investigation Work Plan with Ecology's Toxic Cleanup Program. The most recent draft, dated April 15, 2020, is being reviewed by Ecology's Toxics Cleanup Program (TCP). TCP's Project Manager has asked EMJ to provide a copy of this closure report when it becomes available, and has informed EMJ that additional sampling may be required as part of the remedial investigation to address issues raised by the data provided in this Report. Star Forge will provide a copy of this report directly to the TCP and to EMJ to facilitate their work under the Agreed Order.

From October 2018 to April 2020, SoundEarth Strategies of Seattle, WA ("SES") conducted hazardous building materials surveys, dangerous waste designations, and oversaw abatement and removal of hazardous building materials and Dangerous Waste from the site. Table 2 summarizes the waste shipped off-site associated with Clean Closure efforts. DH Environmental was engaged by Star Forge in April 2020 to complete all remaining Clean Closure activities, and to carry out other environmental work.

1.3 Clean Closure Target Areas and Materials

"Closure" refers to the process of taking a DWMU out of service and properly cleaning up or decontaminating the DWMU and any areas affected by releases from the DWMU. When this process is finished, a unit is referred to as "closed."²

Generators are required to meet closure performance standards at WAC 173-303-610(2) and (5). When a DWMU is closed, all Dangerous Waste generated at the facility must be removed, and DWMUs that managed or accumulated Dangerous Wastes must also be removed or decontaminated. Legacy contamination of environmental

²Ecology, 2005. *Guidance for Clean Closure of Dangerous Waste Units and Facilities*. Hazardous Waste and Toxics Reduction Program. Publication No. 94-111.

media is being investigated and remediated by EMJ. To facilitate EMJ's cleanup, however, and a condition of sale, Star Forge has undertaken the Clean Closure of the structures on the Property, leveling the site so that it can be fully investigated, remediated, and redeveloped.

The Clean Closure work that has been conducted by Star Forge includes decontamination, designation, and/or removal of debris, containers, and above ground materials potentially designating as Dangerous Waste. Residual slag or significant accumulations of dust on structural elements have been designated and, in some cases, have been removed and disposed of off-site to prepare the structure for demolition. Groundwater is being investigated by EMJ, as is soil contamination, pursuant to the Agreed Order.

The following sections describe the areas identified as DWMUs subject to closure, and additional areas/materials of concern identified across the facility where Dangerous Waste may remain in soil. The sampling schemes are also summarized along with the results of sampling efforts.

2.0 DANGEROUS WASTE MANAGEMENT UNITS

DH Environmental has identified three DWMUs subject to Clean Closure. These areas include two Dangerous Waste Central Accumulation Areas and the baghouse structure and associated equipment that contacted K-listed waste. These areas have been identified by physical inspection, review of historical documents, and interviews with staff that worked at the facility when it was operational. Figure 2 shows the locations of the DWMUs.

Each of the DWMUs have been emptied and sampled. The concrete floors of each unit were cleaned by high pressure steam and water sprays. Concrete wash water was contained and captured using a vacuum truck. The concrete floors were sampled by drilling into the slab to shallow depths of approximately 3-4 inches with a roto-hammer concrete drill and capturing the tailings for analysis. The specific sampling scheme for each DWMU is summarized below and detailed in the attached SAP.

2.1 Clean Closure Performance Standards

The sampling and analysis conducted on the DWMUs was designed with the following objectives in order of precedence:

1. Determine if the DWMU containment or ancillary equipment meets the definition of “hazardous debris” defined as debris that is contaminated with listed dangerous waste or which itself exhibits a dangerous waste characteristic or criteria. If the DWMU containment or ancillary equipment meets the definition of “hazardous debris”, it will be designated and removed accordingly. If the hazardous debris cannot be removed prior to demolition of the superstructure, it will be protected from cross contamination during demolition and addressed after the superstructure is demolished.
2. Determine if the DWMU debris requires further decontamination or removal to meet site cleanup levels or if investigation of surrounding environmental media is warranted based on contaminants detected in the debris. Because site-wide cleanup levels, feasibility analysis, and the Cleanup Action Plan to be implemented under the Agreed Order have not yet been completed, further decontamination, removal, or investigation of environmental media cannot be carried out at this time. All Clean Closure activities that can be done at this time have been completed and are documented herein.

2.2 Former Dangerous Waste Central Accumulation Areas

2.2.1 Central Accumulation Area

The Central Accumulation Area (CAA) is one of two 90/180-day Dangerous Waste accumulation areas. The CAA is located on the northwest corner of the site and is shown in Photo 1 below. The CAA is an approximately 1,000 SF structure with aluminum siding, a concrete slab, and an approximately 1 ft. concrete base wall that served as secondary containment. The CAA stored Dangerous Waste in drums and small containers generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time contained a 300 gallon above ground storage tank that serviced diesel fuel. Consequently, the structure was also known as the “diesel house”.

Sample locations from the concrete floor of the CAA were determined in the field by dividing the area into quadrants. Each sample was collected from areas of staining, if present. If no areas of staining were observed, the sample from the respective quadrant was collected from the center of the quadrant. Samples were collected using a roto-hammer concrete drill and drilling into the concrete surface approximately 3-4 inches and then extracting the drill bit. The drill tailings were collected and placed into laboratory supplied sampling containers. Multiple drill holes were required to obtain sufficient sample volume, obtained from drill holes in close proximity to each other. Photo 1 below shows the location of the CAA and Photos 2 and 3 show the concrete containment and collection of the samples on 29 May 2020. Figure 3 shows the approximate locations of the sample locations on the slab.

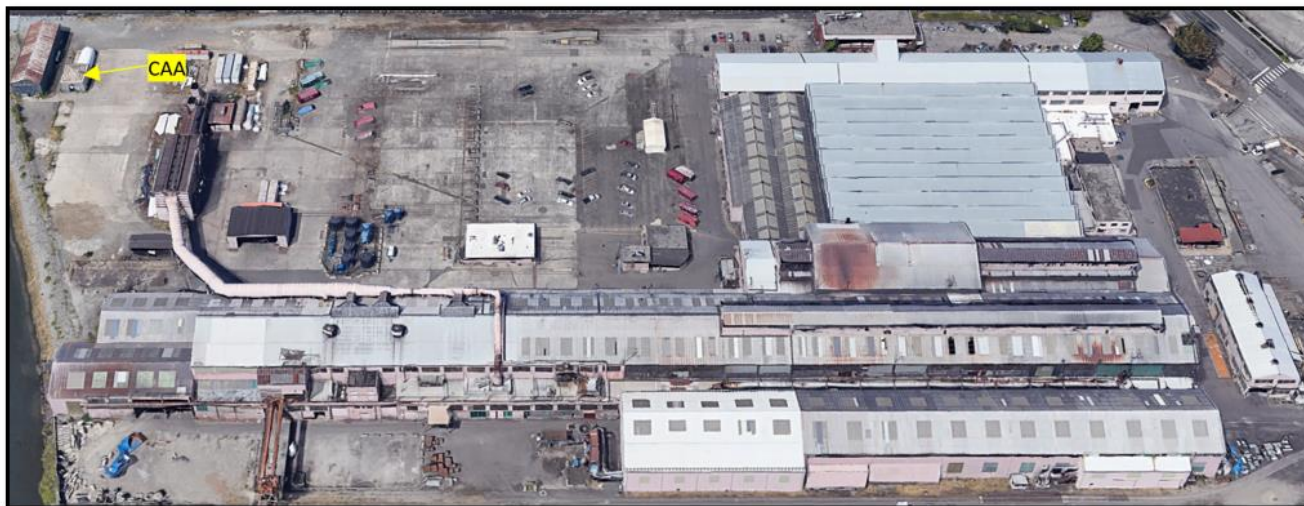


Photo 1: CAA Dangerous Waste Management Unit, Facing North, Adapted from Google Earth, 2018 Imagery



Photo 2: CAA Containment, SE Quadrant, 29 May 2020



Photo 3: CAA Containment, NW Quadrant, 29 May 2020

Each sample, consisting of a composite of several drill hole tailings, was analyzed for gasoline range organics by NWTPH-Gx, diesel range organics by NWTPH-Dx, volatile organic compounds by EPA 8260C, PCBs by EPA Method 8082A, Total RCRA Metals + copper, nickel, and zinc, and TCLP for RCRA 8 Metals. The results are summarized in Table 3 and the Washington State Equivalent Calculations are summarized in Table 4. Based on the results, DH

Environmental has concluded that the CAA containment does not designate as a characteristic waste, listed waste, or a Washington State criteria waste. Therefore, the CAA containment does not meet the definition of hazardous debris. One of the four samples from the CAA containment did exceed the MTCA Method A unrestricted cleanup level for diesel range organics.

2.2.2 Tote Storage Area

The Tote Storage Area is the other 90/180-day Dangerous Waste accumulation area located on the west side of the site and is shown in Photo 4 below. The Tote Storage Area is an approximately 800 SF structure with wooden siding and an asphalt slab. The Tote Storage Area stored Dangerous Waste and used oil totes and drums generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time was used to clean and etch product samples prior to laboratory testing. Consequently, the structure was also known as the “Acid House” or “Etch House” before it was used as a 90/180-day Dangerous Waste accumulation area in the 1990s.

Similar to the CAA, sample locations from the asphalt floor of the Tote Storage Area were determined in the field in accordance with the SAP by dividing the area into quadrants, as shown in Figure 4. Each sample was collected from areas of staining, if present. If no areas of staining were observed, the sample from the respective quadrant was collected from the center of the quadrant. Samples were collected by using a roto-hammer drill and drilling into the asphalt surface approximately 3-4 inches and extracting the drill bit and tailings in a manner similar to the CAA sampling. Photos 5 and 6 below show the asphalt slab and collection of the samples on 03 June 2020.

Each sample, consisting of a composite of several drill hole tailings, was analyzed for gasoline range organics by NWTPH-Gx, diesel range organics by NWTPH-Dx, volatile organic compounds by EPA 8260C, PCBs by EPA Method 8082A, Total RCRA Metals + copper, nickel, and zinc, and TCLP for RCRA 8 Metals. The results are summarized in Table 3. Based on the results, the Tote Storage Area containment does not designate as a characteristic waste, listed waste, or a Washington State criteria waste. PCBs were detected in the asphalt slab in concentrations up to 40 mg/kg. However, the original source of the PCBs is unknown and Star Forge is not aware of any PCBs stored, released, or otherwise managed at this location during the time it has owned the Property, which dates only to 2016. The Washington State WPCB source code listing should not apply to the concrete as the listing applies when the source is from the following, or residues thereof, in accordance with WAC 173-303-9904:

Discarded transformers, capacitors or bushings containing polychlorinated biphenyls (PCB) at concentrations of 2 parts per million or greater (except when drained of all free flowing liquid) and the following wastes generated from the salvaging, rebuilding, or discarding of transformers, capacitors or bushings containing polychlorinated biphenyls (PCB) at concentrations of 2 parts per million or greater: Cooling and insulating fluids and cores, including core papers.

The Tote Storage Area containment does not meet the definition of hazardous debris. However, the Tote Storage Area containment does exceed MTCA Method A unrestricted cleanup levels for diesel range hydrocarbons as well as PCBs.



Photo 4: Tote Storage Area Dangerous Waste Management Unit, Facing North, Adapted from Google Earth, 2018 Imagery



Photo 5: Tote Storage Area Facing West, 03 June 2020



Photo 6: Tote Storage Area NW Quadrant, 03 June 2020

2.3 Baghouse

The baghouse is located in the western portion of the property and was constructed in late 1977 to early 1978. For the purpose of Clean Closure, the baghouse has been designated as a DWMU that includes the approximately 4,000 SF baghouse building and related equipment, including the baghouse tunnel, that conveyed air and dust from the melt shop to the baghouse. The baghouse dust was designated as a K061 waste stream as it meets the definition of K061 - Specific Source Waste from iron and steel sources in accordance with WAC 173-303-9904:

Emission control dust/sludge from the primary production of steel in electric furnaces.

In addition, an electrical utility trench that runs along the eastern perimeter of the baghouse was found to have significant sediment accumulation presumably contaminated with K061 dust.

From December 2019 to March 2020, Clean Harbors Environmental Services, on behalf of Star Forge, conducted extensive dust removal and cleaning of the baghouse equipment. The baghouse equipment, including the baghouse tunnel was cleaned to Alternative Treatment Standards using a combination of high-pressure steam and water sprays, and physical scrubbing. Approximately 119,000 lbs. of K061 dust and debris was removed and disposed of off-site from the baghouse tunnel and the baghouse structures.

The baghouse processing area and concrete slab is divided by a wall thereby creating two separate areas denoted as Baghouse North and Baghouse South. Photo 7 below is an aerial photo showing the baghouse areas designated as the DWMU. Photo 8 shows the baghouse facing west and the division of the structure for the purpose of the sampling and cleaning.

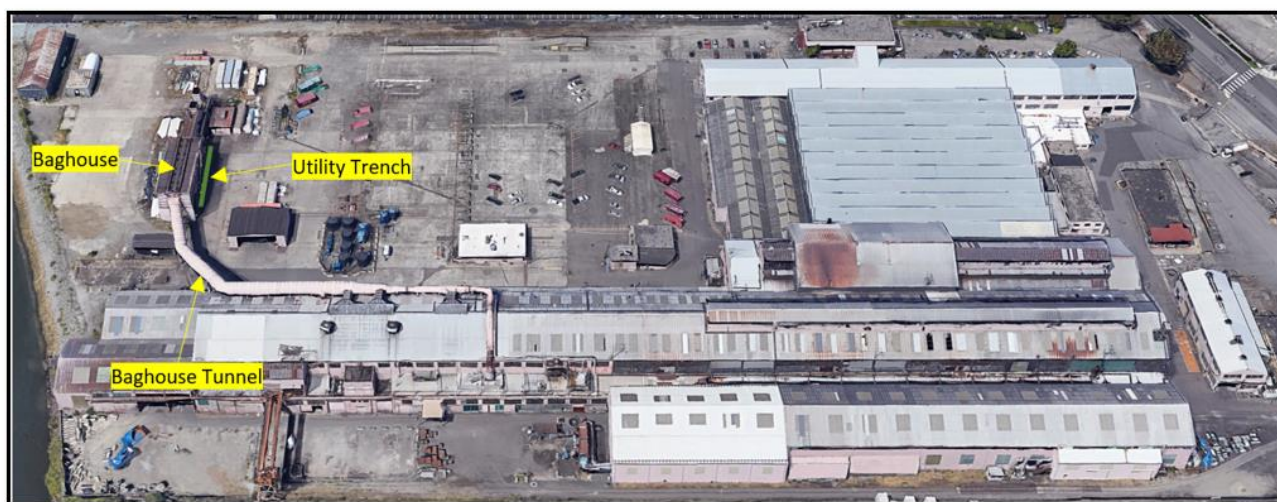


Photo 7: Baghouse Dangerous Waste Management Unit, Facing North, Adapted from Google Earth, 2008 Imagery



Photo 8: Baghouse Dangerous Waste Management Unit, Facing West, Adapted from Google Earth, 2008 Imagery

The utility trench and concrete slab of the baghouse were cleaned using high pressure steam and water sprays in June 2020 by DH Environmental as part of the baghouse DWMU evaluation. Photos 9 and 10 below show the baghouse utility trench while being cleaned, and after cleaning, respectively.



**Photo 9: Baghouse Utility Trench, Facing North,
16 June 2020**



**Photo 10: Baghouse Utility Trench, Facing South,
16 June 2020**

The sampling design for the baghouse consisted of gridding each area. The southern portion of the baghouse was gridded into six equal sized areas due to its larger size and the northern portion was divided into quadrants. The concrete utility trench east of the baghouse was divided into three equally spaced intervals along the length of the trench. See Figure 5 for the sample location detail.

Each sample was collected from areas of staining, if present. If no areas of staining were observed, the sample from the respective grid area was collected from the center of the grid area. Samples were collected by using a roto-hammer concrete drill and drilling into the concrete surface approximately 3-4 inches and extracting the drill bit. The drill tailings were then collected and placed into laboratory supplied sampling containers. Multiple drill holes were required to obtain sufficient sample volume. The drill holes were drilled in close proximity to each other.

Each sample, consisting of a composite of several drill hole tailings, was analyzed for gasoline range organics by NWTPH-Gx, diesel range organics by NWTPH-Dx, volatile organic compounds by EPA 8260C, PCBs by EPA Method

8082A, Total RCRA Metals + copper, nickel, and zinc, and TCLP for RCRA 8 Metals. The results are summarized in Table 3 and the Washington State Equivalent Calculations are summarized in Table 4.

Based on the results, the “Baghouse North” concrete slab designates as a K061 listed waste and should be considered hazardous debris subject to further investigation, decontamination or removal.

Pursuant to 40 CFR Appendix VII to Part 261 - Basis for Listing Hazardous Waste, K061 is listed for hexavalent chromium, lead, and cadmium. Therefore, we propose that the basis for listing and/or delisting the concrete debris associated with the Baghouse DWMU should be a demonstration that the concrete concentrations of hexavalent chromium, lead, and cadmium are below MTCA Method A levels for unrestricted land use. As shown in Table 3, the concentrations of lead and cadmium are below the MTCA Method A levels of 250 mg/kg and 2 mg/kg, respectively. The concentration of trivalent chromium is well below the MTCA Method A level of 2,000 mg/kg. However, hexavalent chromium was found in one location in the Baghouse North at 24 mg/kg, which is above the 19 mg/kg, MTCA Method A cleanup level. The Baghouse concrete containment also exceeds MTCA Method A unrestricted cleanup levels for diesel range hydrocarbons.

2.4 Summary of DWMUs Closure Status

Three DWMUs have been identified for closure in accordance with WAC 173-303-200(h). Table 1 below summarizes the current status of each DWMU in accordance with the Dangerous Waste Regulations.

DWMU Name	Media Designation	Performance Standard	Status of Numeric Clean Closure Levels
Central Accumulation Area	The DWMU concrete slab and superstructure are Non-Hazardous Debris.	High Pressure Steam and Water Sprays	Exceeds MTCA Method A, Unrestricted, for Diesel Range Organics
Tote Storage Area	The DWMU asphalt slab and superstructure are Non-Hazardous Debris.	High Pressure Steam and Water Sprays	Exceeds MTCA Method A, Unrestricted, for Diesel Range Organics and PCBs
Baghouse North	- The DWMU concrete slab is K061 Hazardous Debris. - The DWMU superstructure and baghouse tunnel is Non-Hazardous Debris.	High Pressure Steam and Water Sprays, Physical Abrasion and Scrubbing	Exceeds MTCA Method A, Unrestricted, for Diesel Range Organics and Hexavalent Chromium
Baghouse South	- The DWMU concrete slab is Non-Hazardous Debris. - The DWMU superstructure and baghouse tunnel is Non-Hazardous Debris.	High Pressure Steam and Water Sprays, Physical Abrasion and Scrubbing	Exceeds MTCA Method A, Unrestricted, for Diesel Range Organics
Baghouse Utility Trench	The Baghouse Utility Trench is Non-Hazardous Debris	High Pressure Steam and Water Sprays, Physical Abrasion and Scrubbing	Contaminant levels are below MTCA Method A

Table 1: Summary of DWMUs Closure Status

3.0 WASTE DESIGNATION OF SUSPECT MATERIALS

The following sections discuss the waste designation of materials remaining on-site that were either previously designated as Dangerous Waste, suspected of being Dangerous Waste, or required designation for off-site disposal.

3.1 Melt Shop / Forge Shop Slag

Previous sampling and analysis of slag and sludge in the melt shop and forge shop indicated this material contained high levels of chromium and other metals. Based on total metals only, the slag was designated as characteristic for chromium Toxicity. In addition, some of the slag and sludge removed from the pits was designated as characteristic for chromium, lead, and cadmium however no TCLP analysis was conducted on the slag waste stream. The previous D007, D006, and D008 designation was assumed based on total metals analysis.

On 28 May 2020, DH Environmental conducted additional sampling to thoroughly designate the remaining slag and solids in three different pits including the “AOD Pit”, “AFD Pit”, and the “HE Pit”. These locations are shown in Figure 6. Representative samples were collected from each pit and initially analyzed for VOCs by EPA 8260C, PAHs by EPA 8270D, PCBs by EPA 8082, and Total RCRA 8 Metals + Copper, Nickel, and Zinc as well as TCLP for RCRA 8 metals.

The slag exhibited high total concentrations of chromium, copper, and nickel consistent with previous total metals analysis. However, despite the high total concentrations, all samples “passed” the TCLP for RCRA 8 metals. In addition, the total analysis of volatiles by EPA 8260C and PAHs by EPA 8270D did not indicate the slag should designate as characteristic for any TCLP volatile or semi-volatile compounds.

Analysis has identified low level trace constituents listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non-Specific Sources. For example, acetone was detected in the “AFP Pit” at a concentration of 0.0091 mg/kg as well as benzene at 0.0059 mg/kg. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents:

Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste.³

After it was determined that no characteristic or listed waste designations should apply to the slag, Toxic Equivalent Concentration calculations were conducted on each sample in accordance with WAC 173-303-100(5). Samples exhibiting the highest Equivalent Concentrations calculated from the total metals analysis from each pit were then sent to Rainier Environmental of Fife, WA for analysis by Ecology Method 80-12, Dangerous Waste Fish Bioassay. The samples submitted for the fish bioassay study represented a worst-case sample from all the samples collected.

³ Management of Remediation Waste Under RCRA, EPA Publication 530-F-98-026

Subsequently, all of the samples submitted for Dangerous Waste Fish Bioassay testing resulted in zero mortality of the fish population exposed to the slag. The slag was then designated as Non-Dangerous Solid Waste. Attachment 4 is a waste designation package that serves as the designation record for the slag remaining in the Forge Shop and Melt Shop.

3.2 Concrete Stockpile

During the course of Clean Closure and equipment disposal activities, approximately 500 tons of concrete debris was generated to expose and repair underground piping that conveyed stormwater. The origin of the concrete was the “Heat Treat Area”. The concrete pile was previously sampled by Sound Earth Strategies on 03 March 2020. DH Environmental conducted additional sampling on 01 May 2020 to confirm the designation with additional data, and to collect a representative sample for a Dangerous Waste Fish Bioassay. The pile varied from large pieces of broken concrete to small granular sized particles. In addition, some soil overburden was commingled and removed with the concrete as was necessary to remove the concrete from the work area.

After the concrete stockpile was determined not to be a characteristic or listed waste, a Washington State Toxic Criteria book designation was conducted in accordance with WAC 173-303-100(5)(b)) on the highest levels detected for RCRA 8 Metals plus copper, nickel, and zinc, along with PAH values. The book designation resulted in an equivalent concentration of 0.0052 which designates as Dangerous Waste, Toxic, WT02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b), Biological Testing Methods for the Designation of Dangerous Waste, Method 80-12. The fish bioassay resulted in zero fish mortality therefore the waste stream was designated as Non-Dangerous Solid Waste. The concrete pile was shipped off-site and disposed of at the Roosevelt Regional Landfill from 10 June 2020 – 12 June 2020. Attachment 5 is a waste designation package that serves as the designation record for the concrete stockpile.

3.3 Underground Storage Tank Liquids, Sand, and Fill Slag

On 21 April 2020, DH Environmental sampled ten partially buried underground storage tanks (USTs) located within two locations on the east side of the site near E Marginal Way South as shown in Figure 2, with detail shown in Figure 8. The individual USTs are partially buried below grade but are within above grade structures consisting of concrete walls with the space between the tanks filled primarily with slag. Based on a review of historical documents and interviews with individuals that worked at the facility when it was operational, the USTs serviced metal cutting oil, diesel fuel, and various fuel oils including bunker oil.

Out of a total of eighteen USTs, eight of the tanks were empty, three contained sand from previous closure efforts, six contained oily water, and one contained diesel fuel. For each of the tanks that contained media, all were sampled and analyzed for volatile organic compounds by EPA Method 8260C, semi-volatile analysis by 8270D, PCBs by EPA Method 8082A, total metals, and follow up TCLP if warranted. In addition, the slag that surrounds the tanks in the tank system was sampled and analyzed for the same analytes with follow-up analysis for TCLP arsenic and chromium along with a Dangerous Waste Fish Bioassay. Sample locations for the slag are shown on Figure 8.

Based on the analysis of the UST liquids, sand, and surrounding fill slag, all the media designated as Non-Dangerous Solid Waste. The UST liquids were removed and disposed of or recycled off-site at appropriately permitted facilities

during the week of 12 May 2020. The fill-slag remains on-site along with the empty USTs which are, as of the date of this report, in the process of being licensed and registered so that they may be closed in accordance with WAC 173-360A. A UST plan to close the USTs in place, as permitted by Ecology's UST rules, has been submitted to the UST program. The designation packages for the UST liquids, sand, and slag are included as Attachment 6.

3.4 Area Wide Statistical Sampling

The interior of the main structure comprising the former melt shop, forge shop, and the heat treat area is shown in Figure 2. Star Forge conducted extensive removal of dust, fine particles, and exposed soil (henceforth "area wide dust") from the floor, trusses, and other structural surfaces during 2019 to early 2020. The area wide dust has been referred to as process waste in previous documents and correspondence. This material is a mixture of dust, fine particulates, soil "track-in" and exposed soil that accumulated throughout the facility over many years of operation. The material is not a waste stream that was generated from any one process or unit operation.

Previous designation of this material is based on total metals, TCLP metals and total PCBs. This waste stream previously "passed" TCLP for RCRA 8 metals. However, the total metals content caused the area-wide dust to "book designate" as a Toxic Criteria Dangerous Waste and was assigned WA State Dangerous Waste number WT02. A fish bioassay was not conducted to refute the book designation. Therefore, the WT02 designation was assumed and approximately 2,500,000 lbs. of the area wide dust were removed and disposed of as WA State Toxic Criteria WT02 waste during 2019 and early 2020.

Although most of the area wide dust has been removed from inside the buildings, some of this material remains on the floor of the facility and has possibly comingled with areas of exposed soil. Therefore, an area wide statistical analysis of the dust, fine particles, and exposed soil was conducted to designate the remaining material so that it can be properly managed during the forthcoming demolition of the structures.

The statistical evaluation of the area wide dust was conducted using Visual Sample Plan (VSP); a statistical software package developed by the Pacific Northwest National Laboratory. VSP integrates data quality objectives into a defensible sampling design and conducts the required calculations for sample size and sample location. The required sample size estimated by VSP is based on several variables including the constituent estimated concentration standard deviation, regulatory threshold, and desired confidence level.

The sample design for the area wide sampling incorporated 22 sample locations chosen randomly on a grid generated by VSP. The sampling locations are shown on Figure 9. All samples were analyzed for Volatiles by EPA Method 8260C, PCBs by EPA Method 8082A, Total RCRA Metals + Copper, Nickel, and Zinc, and TCLP RCRA 8 metals.

Based on the statistical analysis, the mean TCLP concentration of all RCRA 8 metals was below the respective thresholds for the toxicity characteristic. In addition, the mean PCB concentration of the area wide dust was shown to be 0.83 mg/kg. Analysis did identify low level trace VOCs listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non-Specific Sources. The concentration of VOCs did not approach TCLP volatiles characteristic levels and none of the original processes generating any of the trace constituents in question are known therefore RCRA F Series is not applicable.

After the laboratory results were received, a Washington State Toxic Criteria book designation calculation was performed for each of the 22 samples taken throughout the facility. All samples had an Equivalent Concentration (EC) between 0.001% and 1.0%, resulting in a book designation of Washington State Toxic Criteria WT02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b). The two area wide samples with the highest EC calculations were selected for fish bioassay analysis. Both fish bioassays resulted in zero fish mortality and therefore the WT02 designation was refuted.

Based on the statistical analysis of total metals, TCLP metals, PCBs and VOCs, the area wide dust has been designed as Non-Dangerous Solid Waste. Further details about the sampling plan design are included in the SAP. In addition, the designation package for the area wide dust is included in Attachment 7. This designation is meant to apply to dust, fine particles, and above ground exposed soil remaining in the forge Shop, melt shop, and heat treat shop areas in the main facility structure. During the course of demolition and site stabilization, this media may need to be removed and disposed of off-site for several reasons including stormwater pollutant source control, dust control, and surface preparation for asphalt application to stabilize areas of exposed soil. This designation is not meant to apply to any subsurface environmental media.

4.0 SUMMARY AND RECOMMENDATIONS

Star Forge has conducted the required Clean Closure activities that can be accomplished under Washington's Dangerous Waste regulations with the structures still intact, and without interfering with the work being undertaken by EMJ. The concrete and asphalt slabs associated with the DWMU's, along with the soil and groundwater under the DWMUs, may require remediation following the completion of the Cleanup Action Plan for the Site.

Central Accumulation Area

The Central Accumulation Area concrete slab has been designated as Non-Hazardous Debris. The concrete slab does exceed MTCA Method A cleanup levels for diesel range organics. We recommend the slab should be either removed or scarified to meet site-wide cleanup levels once they have been established, after the superstructure has been demolished, and the CAP has been finalized. Further, we recommend additional investigation of the environmental media under the slab to ensure compliance with WAC 173-303-610(2) and (5). The slab should be protected during demolition to avoid cross contamination or further contamination of environmental media.

Tote Storage Area

The Tote Storage Area concrete slab has been designated as Non-Hazardous Debris. The concrete slab does exceed MTCA Method A cleanup levels for diesel range organics and PCBs. We recommend the slab should be either removed or scarified to meet site-wide cleanup levels once they have been established, after the superstructure has been demolished, and the CAP has been finalized. Further, we recommend additional investigation of the environmental media under the slab to ensure compliance with WAC 173-303-610(2) and (5). The slab should be protected during demolition to avoid cross contamination or further contamination of environmental media.

Baghouse

The Baghouse concrete slab has been designated as Hazardous Debris for K061 Listing. The concrete slab also exceeds MTCA Method A cleanup levels for diesel range hydrocarbons and hexavalent chromium. We recommend the slab should be either removed or scarified to meet site-wide cleanup levels once they have been established, after the superstructure has been demolished, and the CAP has been finalized. Further, we recommend additional investigation of the environmental media under the slab to ensure compliance with WAC 173-303-610(2) and (5). The slab should be protected during demolition to avoid cross contamination or further contamination of environmental media. The baghouse tunnel and all baghouse equipment should also be visually inspected once they have been brought to ground level so they can be safely and more thoroughly evaluated prior to off-site disposal or recycling.

Melt Shop / Forge Shop Slag

The slag remaining in the melt shop / forge shop has been designated as Non-Dangerous Solid Waste and is not subject to Clean Closure or the Dangerous Waste regulations. The slag does not present an impediment to demolition. However, the slag does contain high concentrations of heavy metals and should be targeted for evaluation under the RI/FS.

Concrete Stockpile

The concrete stockpile was designated as Non-Dangerous Solid Waste and was shipped off-site and disposed of at the Roosevelt Regional Landfill from 10 June 2020 – 12 June 2020. No further action is required for this waste stream other than to maintain designation records for five years in accordance with WAC 173-303-210.

Underground Storage Tank Liquids, Sand, and Fill Slag

All media associated with the USTs was designated as Non-Dangerous Solid Waste. The liquids in the USTs were disposed of off-site on during the week of 12 May 2020. The fill-slag remains on-site along with the empty USTs which are, as of the date of this report, in the process of being licensed and registered so that they may be closed in accordance with WAC 173-360A. The fill-slag does not present an impediment to demolition of the larger structures at the facility. However, the slag does contain high concentrations of heavy metals. Further study of the UST area has been targeted by EMJ for evaluation as part of the RI/FS.

Area Wide Dust

The area wide dust has been designated as Non-Dangerous Solid Waste. During the course of demolition and site stabilization, this media may need to be removed and disposed of off-site for several reasons including stormwater pollutant source control, dust control, and surface preparation for asphalt application to stabilize areas of exposed soil. Drums and/or solid waste containers should be available to contain the area wide dust before, during, and after demolition. The area wide dust may be removed through sweeping, vacuum truck, or by heavy equipment if necessary. The designation of the area wide dust does not apply to any subsurface environmental media.

TABLE -2
Star Forge, LLC
Hazardous Waste Shipments of from Site Closure Operations
November 2018 to Present

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code
CH1721830-1	PPE from decontamination of facility	11/8/2018	75	12885240FLE	D007	NA
CH1721784-1	Sludge from decontamination of facility	11/8/2018	1200	12885239FLE	D007	NA
CH1735588	Aquasol 20 20	1/11/2019	356	012885528FLE	D002	NA
CH1742114	CH2O Boiler Treatment - 6267	1/11/2019	293	012885527FLE	D002	NA
CH1750992	Consolidated Aerosol Liquids	1/11/2019	139	012885528FLE	D001, D035	NA
1282936-1	Contaminated Grease	1/11/2019	235	012885527FLE	NONE	WT02
CH1735567	Coolacide - Loosepack	1/11/2019	110	012885528FLE	NONE	WP02, WT02
CH1729496	Eliminator 103 - Loosepack	1/11/2019	25	012885528FLE	NONE	WT02
1282936-1	Contaminated Grease	1/17/2019	167	011776126FLE	NONE	WT02
CH1786528	Consolidated Acids	2/18/2019	132	012884952FLE	D002	NA
CH1786533	Flammable acids	2/18/2019	135	012884952FLE	D001, D002	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	2/18/2019	30	012884952FLE	D002	WT02
LCCRA	Labpack Acid & Acid Compatibles For Incineration	2/18/2019	22	012884952FLE	D001, D002	WT02
LCCRA	Labpack Acid & Acid Compatibles For Incineration	2/18/2019	6	012884952FLE	D002	WT02
LCCRB	Labpack Basic & Basic Compatibles For Incineration	2/18/2019	60	012884952FLE	D002	WT02
LCCRC	Labpack Organics For Incineration	2/18/2019	37	012884952FLE	NONE	WT02
LCCRO	Labpack Oxidizers For Incineration	2/18/2019	7	012884952FLE	D001, D003	WT02
ES1785848	Pit Cleaning Sludge	2/18/2019	8457	012886241FLE	D004,D007,D008	NA
ES1785845	Pit Cleaning Sludge	2/18/2019	2788	012886241FLE	D006,D007,D008	NA
ES1785848	Pit Cleaning Sludge	3/15/2019	8418	012886248FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	3/15/2019	10841	012886264FLE	D004,D007,D008	NA
ES1795989	Ring Mill Coolant - Antifreeze	3/22/2019	9988	012886287FLE	NONE	WT02
ES1785848	Pit Cleaning Sludge	5/3/2019	9851	012886309FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	5/3/2019	2865	012886328FLE	D004,D007,D008	NA
OR329284	Pit Cleaning Sludge	5/8/2019	8500	011968468FLE	D004,D007,D008	NA
OR329284	Pit Cleaning Sludge	5/17/2019	12780	011961581FLE	D004,D007,D008	NA
OR329284	Pit Cleaning Sludge	5/17/2019	3060	011961582FLE	D004,D007,D008	NA
OR340979	Vault Sludge	5/20/2019	10000	012886361FLE	NONE	WP02, WT02
OR329284	Pit Cleaning Sludge	5/23/2019	16160	011961597FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	5/31/2019	17976	012886371FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	6/3/2019	7719	012886372FLE	D004,D007,D008	NA
ES1795989	Ring Mill Coolant - Antifreeze	6/12/2019	1260	012886377FLE	NONE	WT02
OR340979	Vault Sludge	6/25/2019	10960	012886384FLE	NONE	WP02, WT02
OR340979	Vault Sludge	6/25/2019	1080	012886385FLE	NONE	WP02, WT02
OR340979	Vault Sludge	6/26/2019	39660	011968520FLE	NONE	WP02, WT02
OR340979	Vault Sludge	6/26/2019	33580	011968521FLE	NONE	WP02, WT02
OR340979	Vault Sludge	7/10/2019	53120	020246762JJK	NONE	WP02, WT02
1877983	Echogel - Unused	8/2/2019	554	011968578FLE	NONE	WT02
1883817	Echogel - Used	8/2/2019	2946	011968578FLE	NONE	WT02
ES1785848	Pit Cleaning Sludge	8/6/2019	12786	012886399FLE	D004,D007,D008	NA
OR329284	Pit Cleaning Sludge	9/12/2019	15820	011961788FLE	D004,D007,D008	NA
LCCRA	Labpack Acid & Acid Compatibles For Incineration	10/11/2019	252	013867363FLE	D001, D002	NA
LCCRB	Labpack Basic & Basic Compatibles For Incineration	10/11/2019	200	013867363FLE	D002	NA
OR343220	Oil Tank Cleaning Sludge	11/6/2019	19160	012886418FLE	NONE	WT02
49312	Area-wide Dust	11/18/2019	63320	012886445FLE	NA	WT02
49312	Area-wide Dust	11/19/2019	64780	012886444FLE	NA	WT02
49312	Area-wide Dust	11/21/2019	63020	012886471FLE	NA	WT02
49312	Area-wide Dust	11/21/2019	63000	012886472FLE	NA	WT02
49312	Area-wide Dust	11/25/2019	61380	012886473FLE	NA	WT02
49312	Area-wide Dust	11/25/2019	64320	012886474FLE	NA	WT02
49312	Area-wide Dust	12/3/2019	62000	012886475FLE	NA	WT02
49312	Area-wide Dust	12/3/2019	64000	012886476FLE	NA	WT02

TABLE -2
Star Forge, LLC
Hazardous Waste Shipments of from Site Closure Operations
November 2018 to Present

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code
49312	Area-wide Dust	12/5/2019	62000	012886477FLE	NA	WT02
49312	Area-wide Dust	12/5/2019	64000	012886478FLE	NA	WT02
49312	Area-wide Dust	12/9/2019	62000	012886479FLE	NA	WT02
49312	Area-wide Dust	12/9/2019	62000	012886480FLE	NA	WT02
49312	Area-wide Dust	12/9/2019	64000	012886481FLE	NA	WT02
49312	Area-wide Dust	12/10/2019	62000	012886482FLE	NA	WT02
49312	Area-wide Dust	12/11/2019	62000	012886483FLE	NA	WT02
49312	Area-wide Dust	12/11/2019	62000	012886484FLE	NA	WT02
49312	Area-wide Dust	12/11/2019	64000	012886485FLE	NA	WT02
49312	Area-wide Dust	12/12/2019	62000	012886486FLE	NA	WT02
49312	Area-wide Dust	12/13/2019	63020	012886487FLE	NA	WT02
49312	Area-wide Dust	12/13/2019	64000	012886488FLE	NA	WT02
49312	Area-wide Dust	12/15/2019	62000	012886491FLE	NA	WT02
49312	Area-wide Dust	12/16/2019	64000	012886489FLE	NA	WT02
49312	Area-wide Dust	12/16/2019	62000	012886490FLE	NA	WT02
49312	Area-wide Dust	12/17/2019	64000	012886492FLE	NA	WT02
49312	Area-wide Dust	12/18/2019	63000	012886493FLE	NA	WT02
49312	Area-wide Dust	12/18/2019	62000	012886494FLE	NA	WT02
49312	Area-wide Dust	12/19/2019	62000	012886495FLE	NA	WT02
49312	Area-wide Dust	12/19/2019	64000	012886509FLE	NA	WT02
49312	Area-wide Dust	12/20/2019	64000	012886500FLE	NA	WT02
49312	Area-wide Dust	12/20/2019	62000	012886501FLE	NA	WT02
49312	Area-wide Dust	12/20/2019	62000	012886502FLE	NA	WT02
49312	Area-wide Dust	1/8/2020	62740	012886503FLE	NA	WT02
49312	Area-wide Dust	1/30/2020	60560	012886504FLE	NA	WT02
49312	Area-wide Dust	2/10/2020	61460	012886505FLE	NA	WT02
49312	Area-wide Dust	2/10/2020	61100	012886506FLE	NA	WT02
OR344535	Baghouse Dust	2/10/2020	19760	014224090FLE	K061	NA
OR343941	AOD pit Solids	2/11/2020	34260	014224089FLE	D007	NA
OR343941	AOD pit Solids	2/11/2020	21660	014224091FLE	D007	NA
49312	Area-wide Dust	2/12/2020	62780	012886507FLE	NA	WT02
49312	Area-wide Dust	2/13/2020	62220	012886508FLE	NA	WT02
OR344529	Baghouse Dust/Debris	2/17/2020	4440	013537409FLE	K061	NA
OR344529	Baghouse Dust/Debris	2/17/2020	3880	013537410FLE	K061	NA
OR344529	Baghouse Dust/Debris	2/17/2020	2840	013537411FLE	K061	NA
OR344535	Baghouse Dust	2/25/2020	20620	013537408FLE	K061	NA
49312	Area-wide Dust	2/27/2020	63500	012886511FLE	NA	WT02
OR344529	Baghouse Dust/Debris	3/12/2020	4220	013537460FLE	K061	NA
OR344341	Stormwater Treatment Tank Sludge	3/19/2020	48900	012886530FLE	D007, D008	NA
49312	Area-wide Dust	3/31/2020	20700	012886541FLE	NA	WT02
49312	Area-wide Dust	3/31/2020	27020	012886544FLE	NA	WT02
49312	Area-wide Dust	3/31/2020	16600	012886545FLE	NA	WT02
49312	Area-wide Dust	3/31/2020	20860	012886546FLE	NA	WT02
49312	Area-wide Dust	3/31/2020	21480	012886551FLE	NA	WT02
CH1997101	Paint chips/Dust/Sandblast media	4/1/2020	180	014582446FLE	D005, D006, D007, D008	NA
ES1785848	Pit Cleaning Sludge	4/1/2020	400	014582446FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	4/1/2020	400	014582446FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	4/1/2020	400	014582446FLE	D004,D007,D008	NA
CH1997777	Safety Klean Cleaning Solvent	4/1/2020	190	014582447FLE	D001, D039	NA
CH1997727	Salt Rock	4/1/2020	400	014582446FLE	D004, D005, D006, D007, D008, D010	NA

TABLE -2
Star Forge, LLC
Hazardous Waste Shipments of from Site Closure Operations
November 2018 to Present

Profile #	Waste Description	Shipment Date	Shipment Weight (lbs)	Manifest #	Hazardous Waste Code	Dangerous Waste Code
CH1997099	Oil Based Paint	4/2/2020	120	014582452FLE	D001, D005, D006, D007, D008, D011, D035	NA
ES1785848	Pit Cleaning Sludge	4/2/2020	600	014582453FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	4/2/2020	600	014582453FLE	D004,D007,D008	NA
ES1785848	Pit Cleaning Sludge	4/2/2020	600	014582453FLE	D004,D007,D008	NA
49312	Area-wide Dust	4/20/2020	11580	012886243FLE	NA	WT02
OR344535	Baghouse Dust	4/28/2020	31660	008281988FLE	K061	NA
OR344535	Baghouse Dust	4/28/2020	31500	008281990FLE	K061	NA
CH2030655	Filter Cleaning Wash Water contaminated with Baghouse Dust	6/18/2020	8650	014587860FLE	K061, D007	NA
CH344529	Baghouse Dust/Debris	6/18/2020	700	014587861FLE	K061	NA
OR345145	Baghouse Decon Water	6/29/2020	375	020121293JJJ	K061	NA
OR345146	Baghouse Dust	6/29/2020	5000	020121293JJJ	K061	NA
OR345148	Baghouse Debris	6/29/2020	600	020121293JJJ	K061	NA

Table 3
DWMUs Sample Location Data Summary
(All units Mg/Kg)
Clean Closure Report
Star Forge, IIC
Tukwila, Washington

Central Accumulation Area DWMU				Baghouse DWMU														Tote Storage Area DWMU			
Sample ID	CAA-NW-WC	CAA-NE-WC	CAA-SW-WC	CAA-SE-WC	BH-N-SW	BH-N-NW	BH-N-SE	BH-N-NE	BH-S-SE	BH-S-SW	BH-S-M-E	BH-S-M-W	BH-S-NE	BH-S-NW	BH-NE-Trench-WC-01	BH-SE-Trench-WC-02	BH-SE-Trench-WC-03	TS-SW-WC	TS-NW-WC	TS-SE-WC	TS-NE-WC
Analyte																					
TOTAL METALS by 6010D/7471B																					
Arsenic	ND	ND	ND	ND	22	21	16	22	17	15	18	17	19	18	ND	ND	ND	ND	12	24	ND
Barium	230	250	260	210	47	48	62	67	54	47	64	47	48	46	34	72	67	58	74	86	76
Cadmium	ND	0.58	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	26	25	27	20	43	71	55	39	23	21	27	21	150	36	16	23	22	30	66	200	42
Copper	30	27	25	31	24	33	29	26	20	19	24	19	40	23	18	30	28	34	32	44	32
Lead	ND	ND	ND	ND	14	59	130	33	9.8	12	12	12	86	23	13	12	12	7.5	8.5	26	10
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	23	16	23	16	15	26	22	21	16	15	19	14	49	19	11	9.2	20	31	36	53	31
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	69	72	64	52	63	130	220	110	57	64	62	55	200	79	40	64	54	38	85	63	51
Hexavalent Chromium	NS	NS	NS	NS	23	1.6	5.2	1.4	ND	ND	1.1	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
TCPL METALS by 1311/6010D/7470A																					
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	0.77	0.76	0.79	0.79	0.21		0.22	0.20	ND	ND	0.22	ND	0.26	0.25	0.37	0.39	0.34	0.65	0.29	0.57	0.63
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	0.12	0.094	0.11	0.087	0.86	0.16	0.49	0.12	0.078	0.077	0.10	0.11	0.10	0.14	0.073	0.072	0.062	0.054	0.12	0.054	
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES by EPA 8260C ¹																					
Acetone	0.26	0.041	ND	0.18	0.032	0.050	0.014	0.02	0.025	0.029	0.017	ND	0.020	0.02	0.023	0.013	ND	0.057	0.33	0.14	0.11
Carbon Disulfide	ND	ND	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0062	0.0046	0.0051
2-Butanone	0.044	ND	ND	0.045	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.013	0.081	0.037	0.028
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0018	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0014	ND	ND	ND
Tetrachloroethene	ND	ND	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	0.0086	ND	0.011	0.0093	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.015	ND	ND
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	ND	ND	ND
Total PCBs by EPA 8082A																					
Total PCB's	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	15.1	21.2	15.5
Total PAHs by EPA 8270D/SIM																					
Total PAH's	NA	NA	NA	0.765	NA	NA	0.008	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons																					
Gasoline Range	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND
Diesel Range	76	53	76	4700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND
Heavy Hydrocarbon Range	1300	950	860	2400	87	2900	ND	1200	220	ND	ND	ND	ND	ND	NA	NA	NA	20000	15000	16000	20000
Notes:																					
1. Complete 8260C Analysis was conducted. Analytes not listed were not detected at the PQL.																					
2. Values highlighted in green exceed MTCA Method A Cleanup Levels																					
Abbreviations																					
ID = Identification																					
ND = Non-Detect at the PQL																					
NA = Not Analysed																					
PQL = Practical Quantitation Limit																					
Analytical Methods																					
Analysis by OnSite Environmental, Inc., see lab report # 2005-232, 2006-050, 2006-184, 2005-232B, 2006-050B, 2006-184B																					

Table 4
Area-wide Samples Equivalent Concentration
Calculations Summary
 Star Forge, IIC
 Clean Closure Report
 Tukwila, Washington

Sample ID	Equivalent Concentration % ¹	Dangerous Waste Code Based on Book Designation	Fish Bioassay Result	Final Waste Designation
AW-16	0.0345528	WT02	Zero Mortality ²	Non-Dangerous Waste
AW-8	0.0349020			
AW-1	0.0081201			
AW-2	0.0074927			
AW-3	0.0245554			
AW-4	0.0063162			
AW-5	0.0214360			
AW-6	0.0126289			
AW-7	0.0067670			
AW-9	0.0205954			
AW-10	0.0286634			
AW-11	0.0151456			
AW-12	0.0128458			
AW-13	0.0157622			
AW-14	0.0060410			
AW-15	0.0272353			
AW-17	0.0289236			
AW-18	0.0291953			
AW-19	0.0227061			
AW-20	0.0179552			
AW-21	0.0062260			
AW-22	0.0203450			
			Passed ³	

Notes:

1. Equivalent Concentration Calculation as per WAC 173-303100
2. Fish Bioassay conducted per Ecology Publication 80-12.
3. For the purposes of refuting WA Toxic Criteria Book Designation, two area-wide samples (AW-8 and AW-16) with the highest E.C. values were selected for follow-up fish bioassay.

Abbreviations

ID = Identification
 WAC = Washington State Administrative Code
 AW = Areawide

Analytical Methods

Analysis by OnSite Environmental, Inc., see lab report # 2006-002, 2006-002B



Vicinity Map



VICINITY MAP

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure

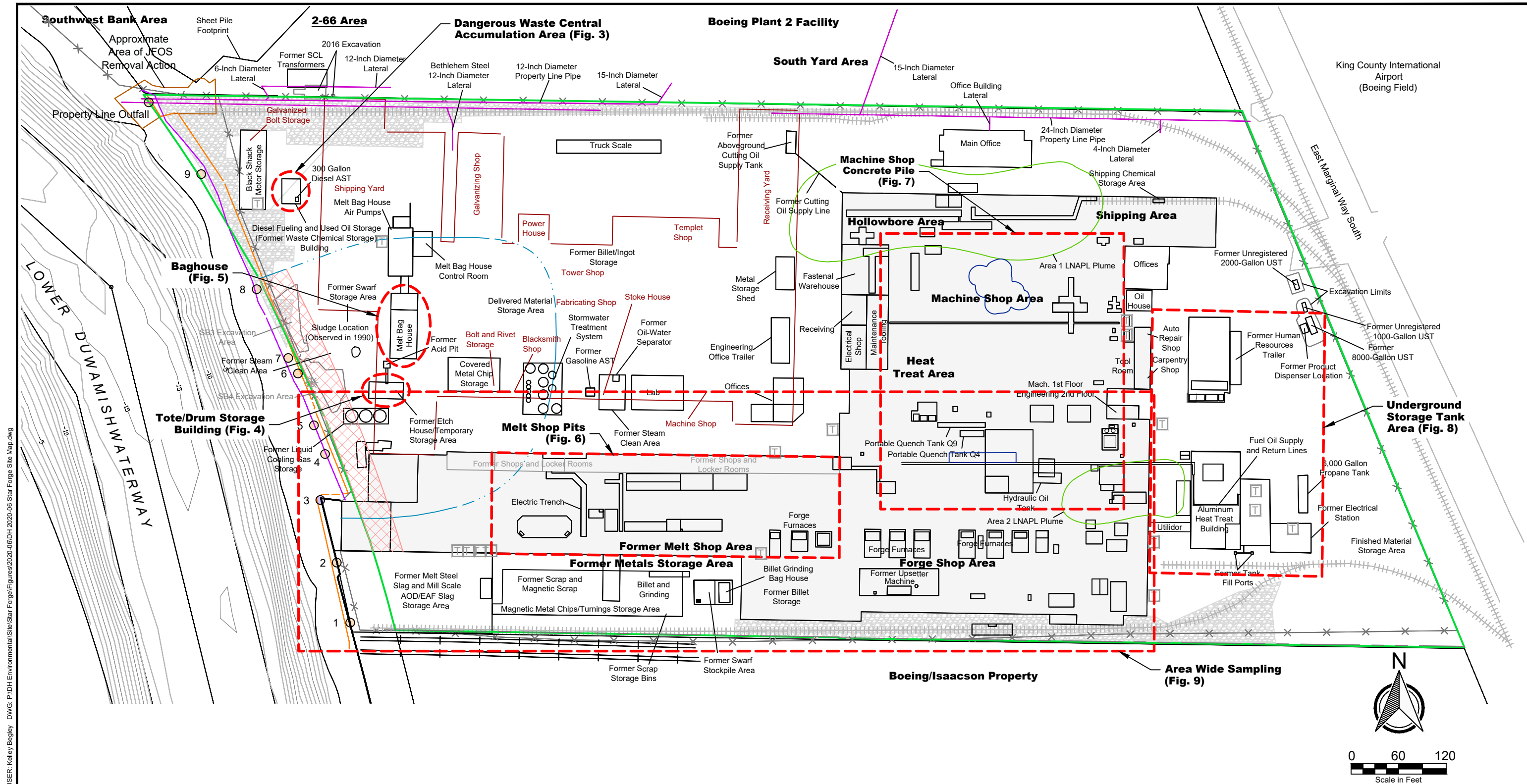
1

LEGEND

Site Location



Background Images Source: Google Earth Pro 5/26/2018



PLOT TIME: 6/19/2020 9:47 AM MOD TIME: 6/17/2020 5:54 PM USER: Kelley Begley DWG: P:\DH Environmental\Site Star Forge\Figures\2020-06\DH 2020-06 Star Forge Site Map.dwg



SITE MAP

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA, 98108

06-19-2020

Figure

2

Legend

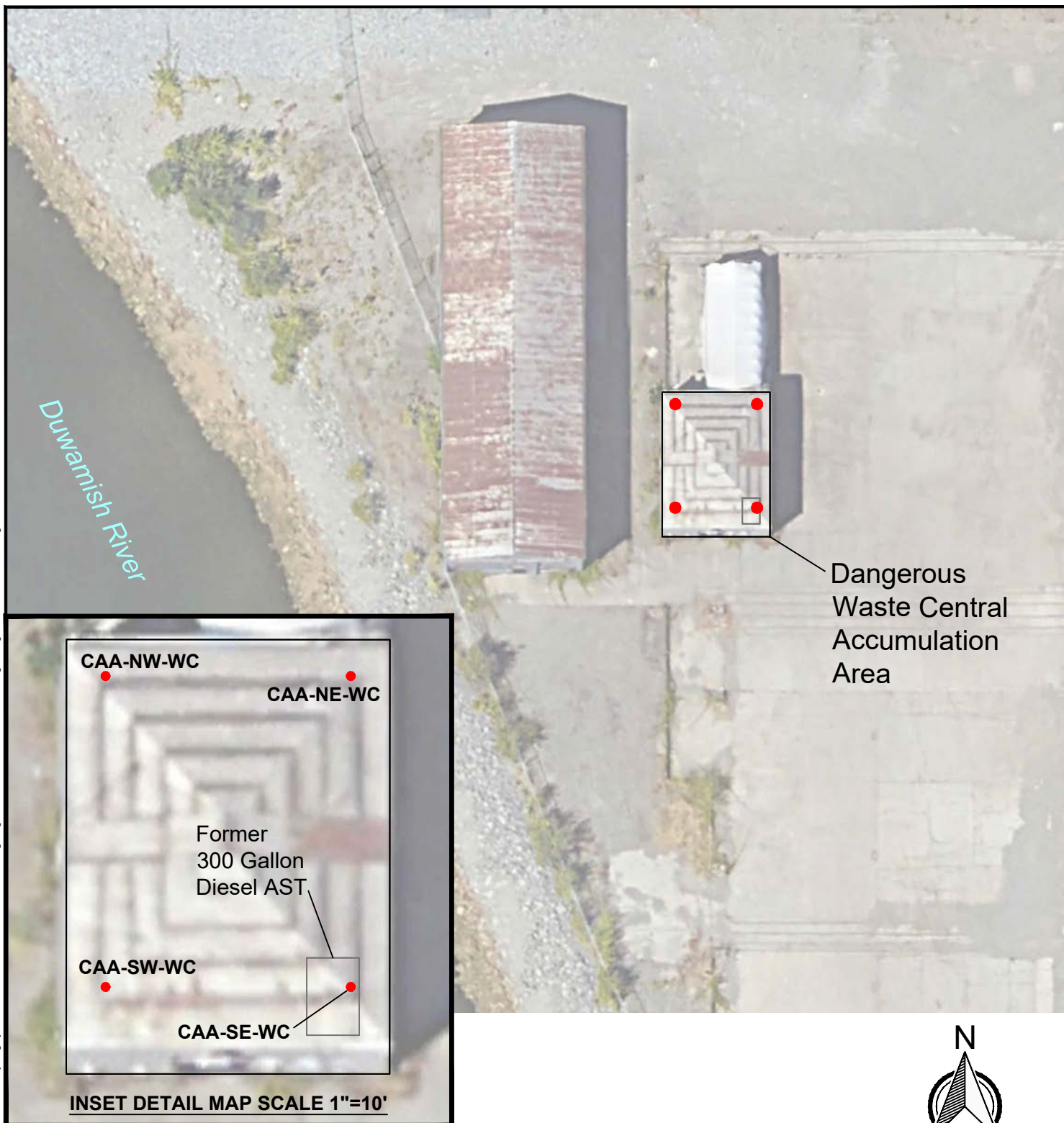
	Approximate Property Boundary		Approximate Excavation Extents
	Top of Shoreline Bank (2012)		Bulkhead Area
	Top of Shoreline Bank (2014)		Outfall (Active)
	Former Bethlehem Steel Facility		Outfall (Inactive)
	Former Embayment		Railroad
	Property Line Outfall Pipes		Fence
	Estimated Extent of LNAPL on Groundwater (Farallon, August 2009)		Transformer
			Below Ground Feature

Notes:

1. Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Achor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., Dated Jan 24, 2012.

2. Red text refers to features of the former Bethlehem Steel Facility.

PLOT TIME: 6/29/2020 5:35 PM MOD TIME: 6/29/2020 5:35 PM USER: Kelley Begley DWG: P:\DH Environmental\Star Forge\Figures\2020-06\Star Forge Dangerous Waste Central.dwg





**Central Accumulation Area
Sampling Locations**

Former Jorgensen Forge Facility 8531 East Marginal Way S Tukwila, WA, 98108	06-19-2020	Figure 3
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LEGEND

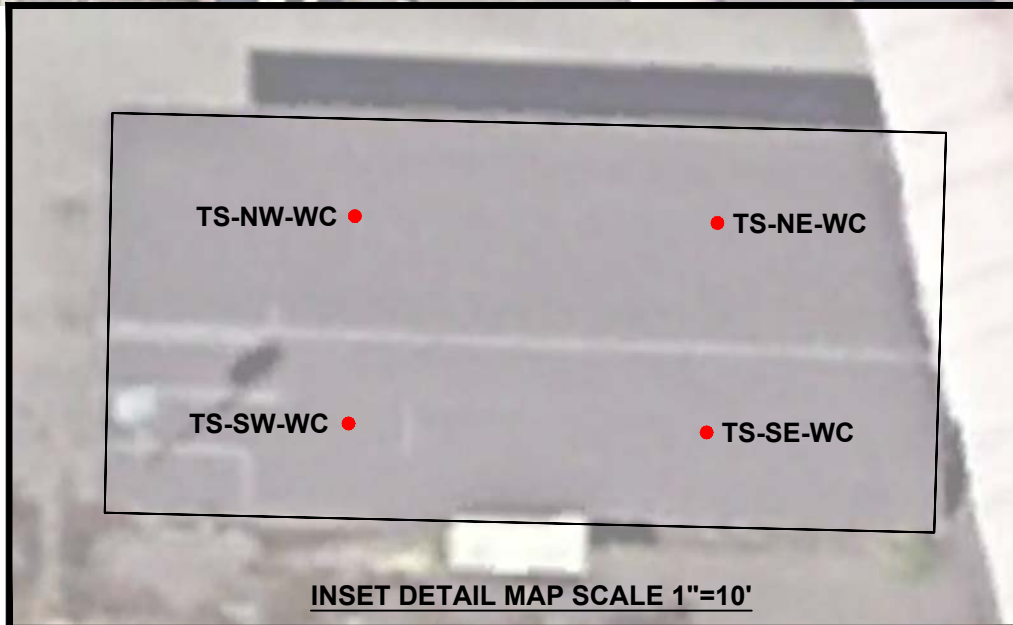
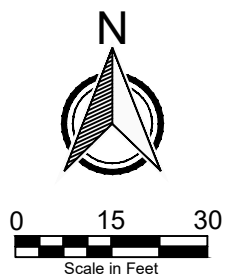
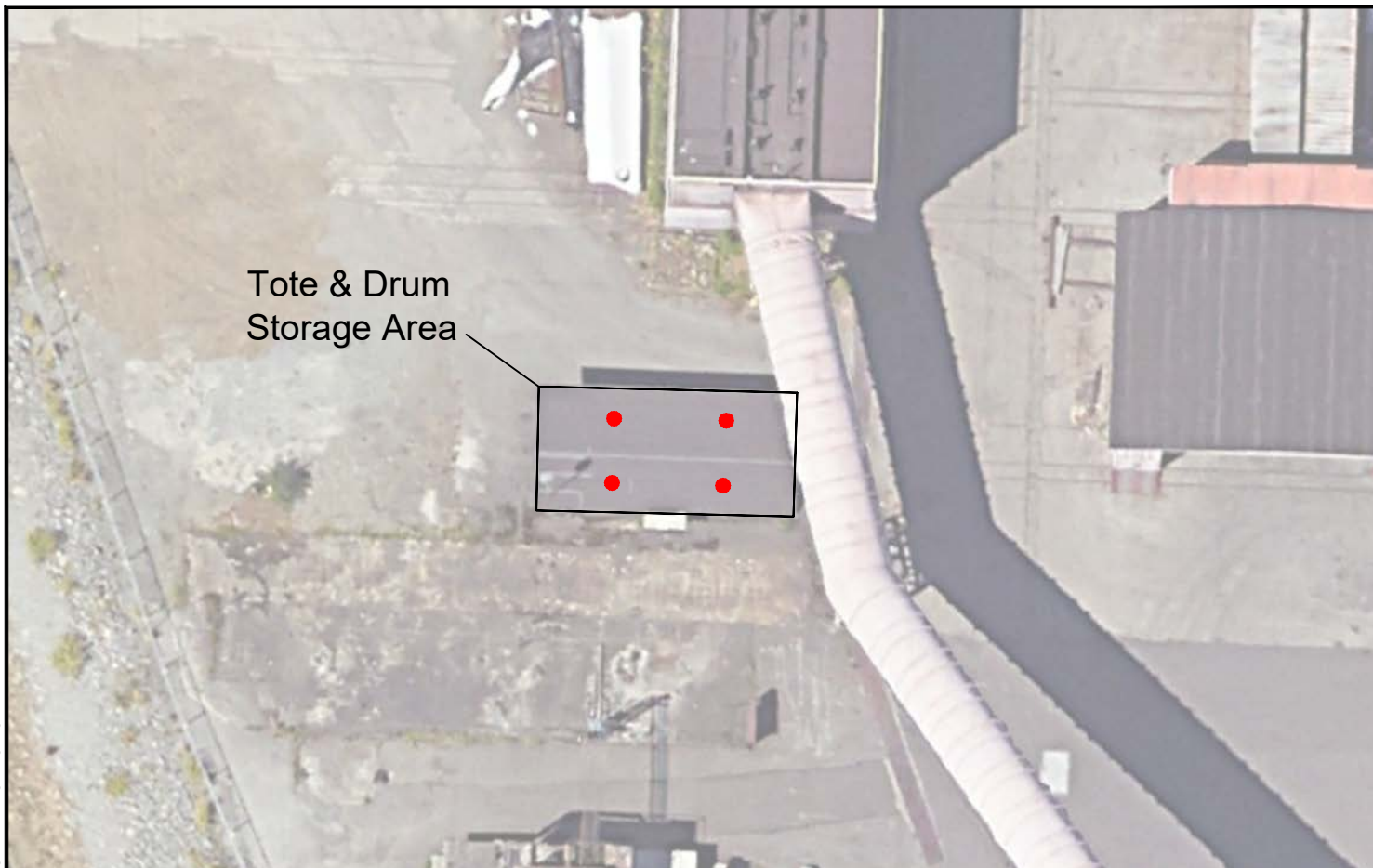
● Clean Closure Confirmation
Sample Location



0 15 30
Scale in Feet

Notes:
1. Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.

PLOT TIME: 6/29/2020 5:37 PM MOD TIME: 6/29/2020 5:36 PM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge\Figures\2020-06\Star Forge Tote Storage Bldg.dwg



Tote Storage Building Sampling Locations

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure

4

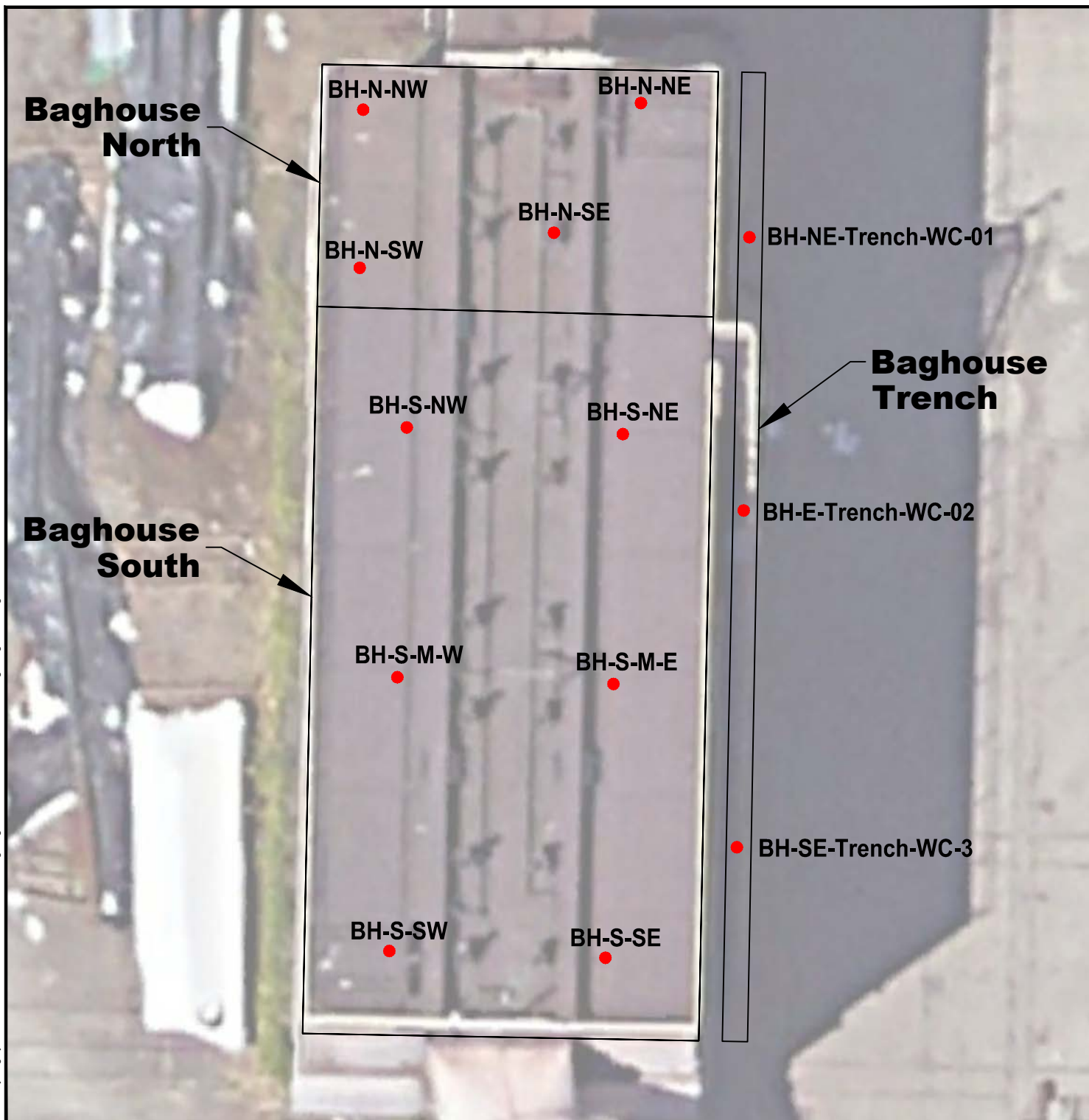
LEGEND

- Clean Closure Confirmation
Sample Location

Notes:

1. Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.

PLOT TIME: 6/30/2020 11:44 AM MOD TIME: 6/30/2020 11:41 AM USER: Kelley Begley DWG: P:\JDH Environmental\Site\Star Forge\Figures\2020-06\DH 2020-06 Star Forge Baghouse.dwg



Baghouse Sampling Locations

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure
5

LEGEND

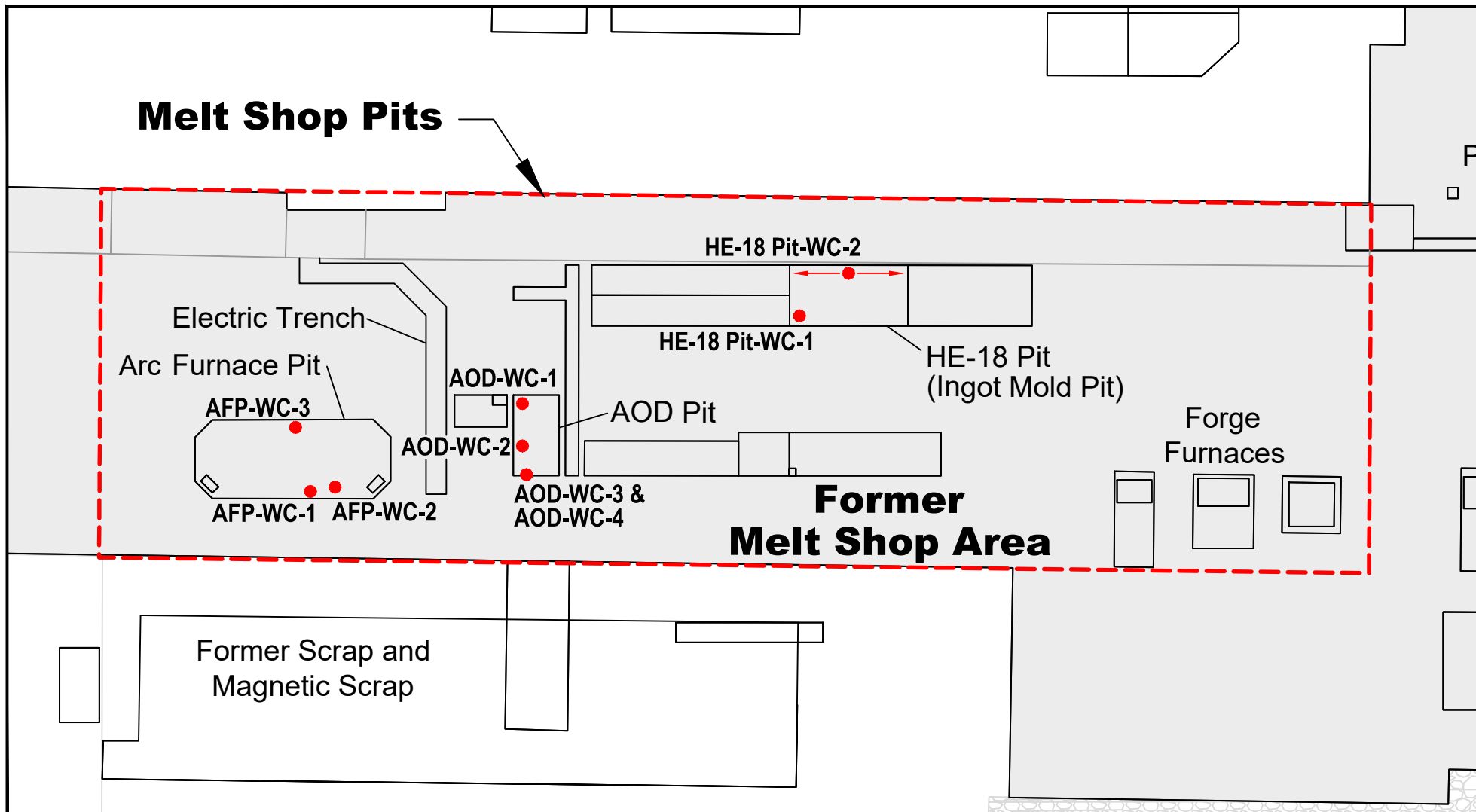
- Clean Closure Confirmation Sample Location

Notes:

- Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.



0 6 12
Scale in Feet





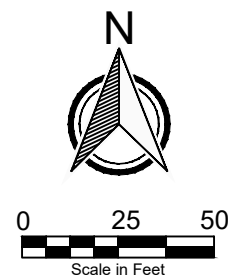
**Melt Shop Pits
Sampling Areas**

Former Jorgensen Forge Facility 8531 East Marginal Way S Tukwila, WA, 98108	06-19-2020	Figure 6
---	------------	--------------------

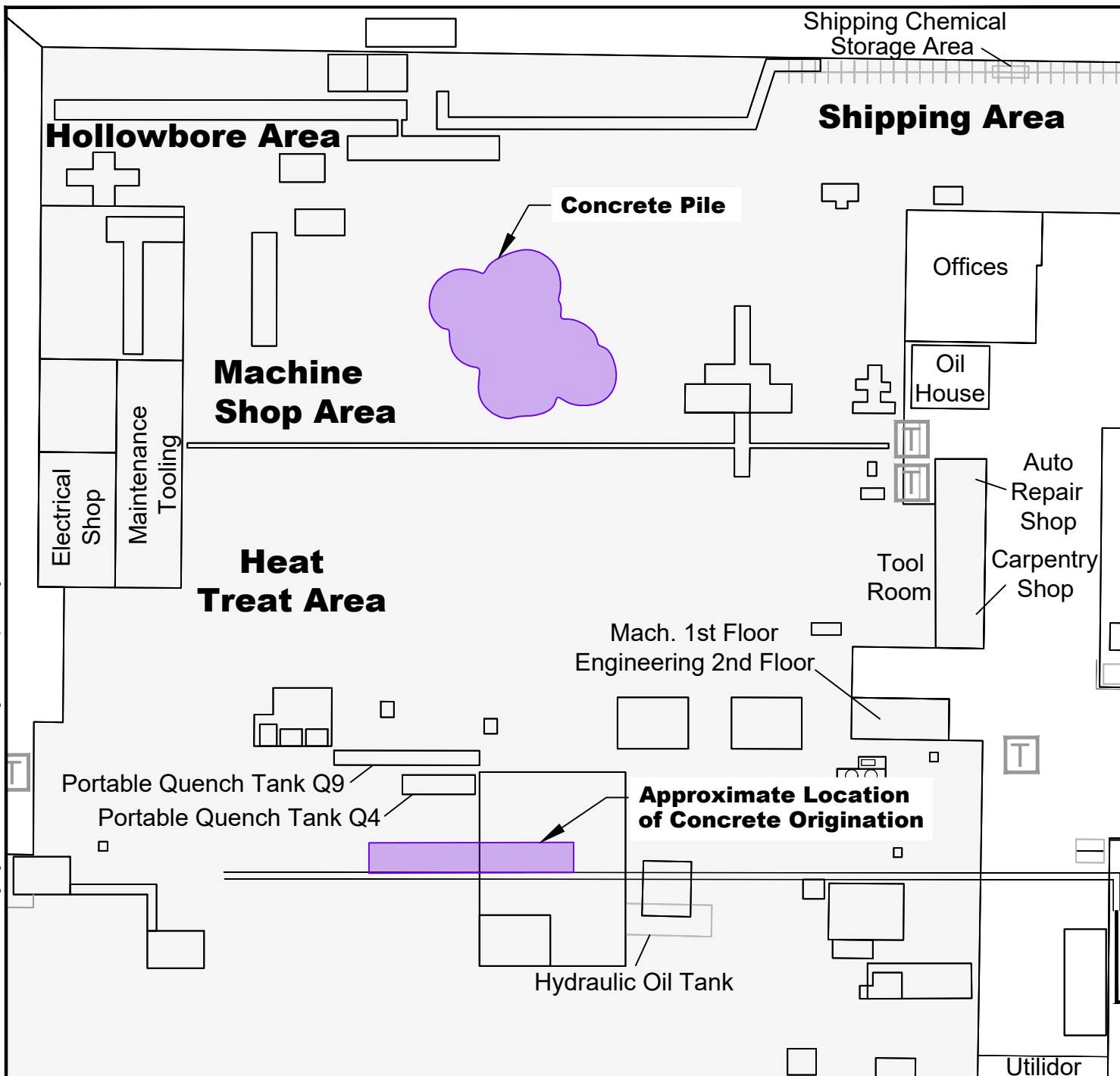
- LEGEND**
- Waste Designation Sample Location
 - ↔ ● ↔ Sample Collected Along Pit Wall Breadth

Notes:

1. Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.



PLOT TIME: 6/18/2020 2:27 PM MOD TIME: 6/18/2020 2:27 PM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge\Figures\2020-06\Star Forge Machine Shop Conc.dwg



Machine Shop Concrete Debris Stockpile

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

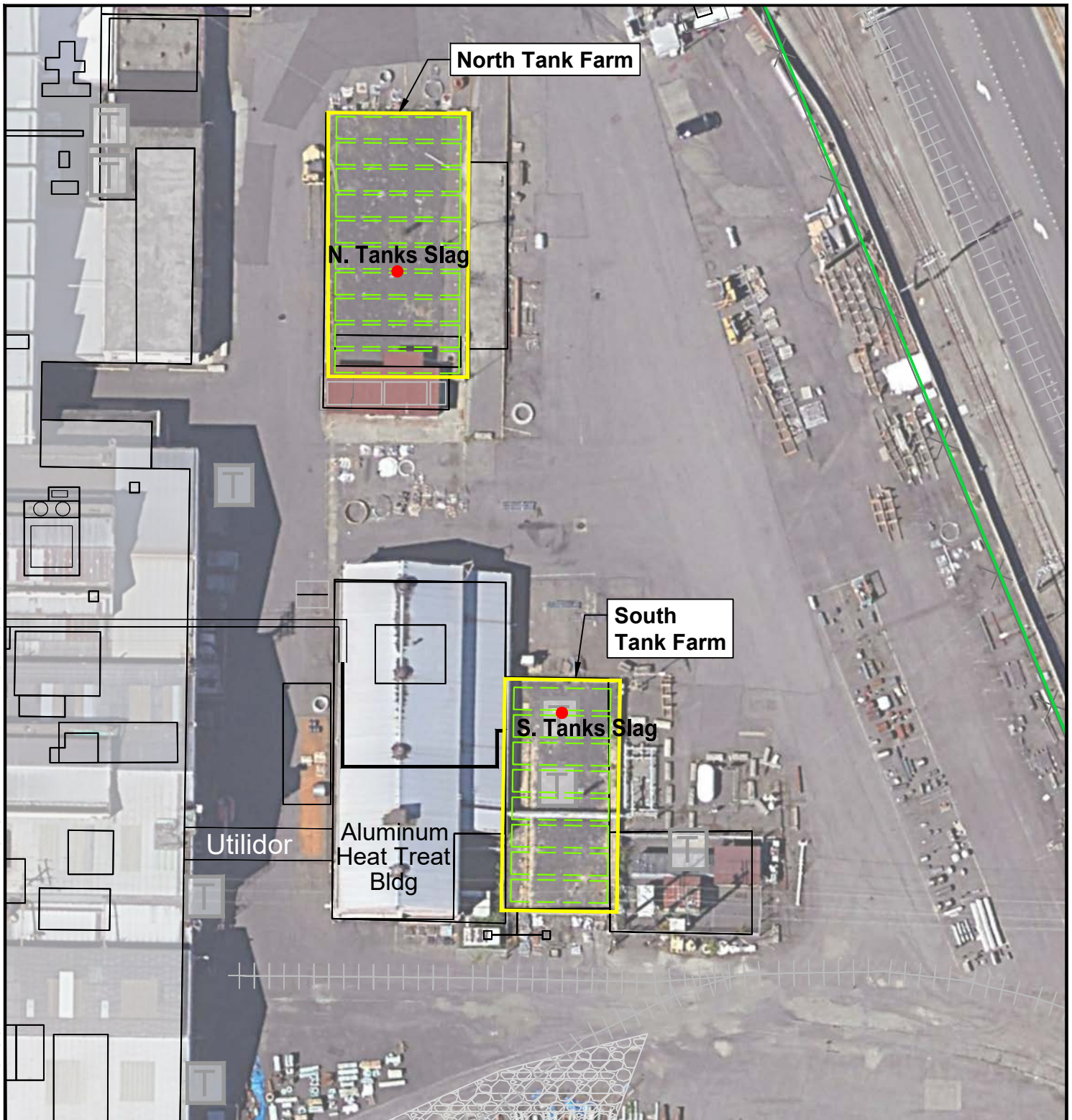
06-19-2020

Figure
7

Notes:

- Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.

PLOT TIME: 6/18/2020 1:43 PM MOD TIME: 6/18/2020 1:22 PM USER: Kelley Begley DWG: P:\DH Environmental\Site\Star Forge\Figures\2020-06 Star Forge Undergrd Storage Tanks.dwg



UNDERGROUND STORAGE TANKS

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure
8

LEGEND

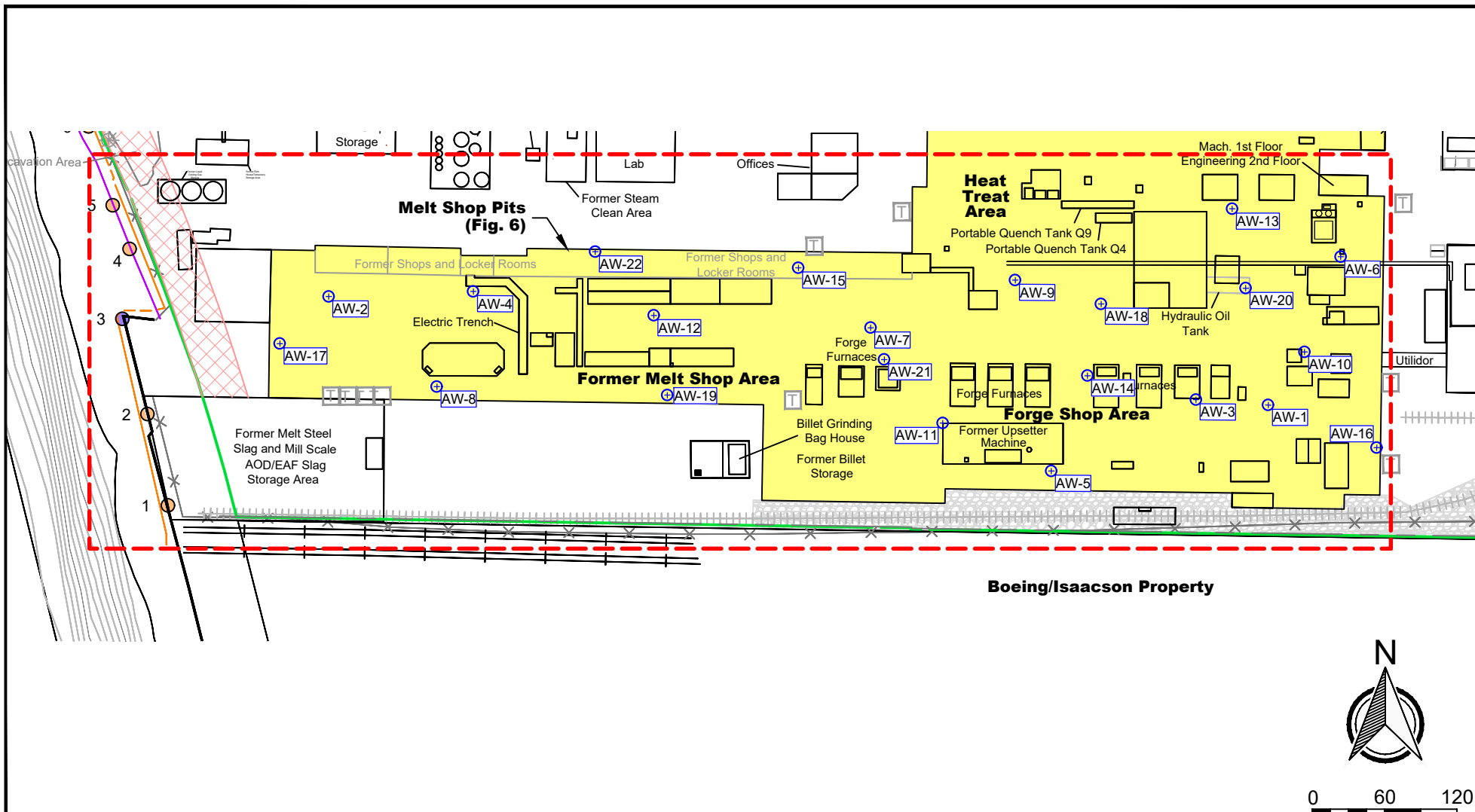
- Waste Designation
- Sample Location

Notes:

- Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., dated Jan 24, 2012.



0 25 50
Scale in Feet



Area Wide Statistical Sampling Locations

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure

9



DANGEROUS WASTE DESIGNATION FORM – Central Accumulation Area Clean Closure Designation Sampling

Star Forge, Former Jorgenson Forge Property

A. WASTE STREAM NAME AND GENERATION INFORMATION																																				
Waste Stream Name: Central Accumulation Area (CAA) Clean Closure Designation Sampling																																				
Generation Process: Concrete dust generated from concrete core samples collected from containment floor the containment floor of the CAA performed as part of site Clean Closure activities.																																				
RCRA ID Number that waste will be managed under: Star Forge LLC, DBA Jorgenson Forge: WAD000602813		Total Quantity and/or Estimated Generation rate: No waste will be generated during site demolition.																																		
Other Descriptions (i.e. Shop, Project, Etc.):																																				
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																				
Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002] Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																		
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: TCLP analysis was conducted on all samples.	Total Metals ☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">Arsenic:</td><td style="width: 30%;"></td><td style="width: 40%;">☒ ND</td></tr><tr><td>Barium:</td><td style="text-align: center;">260</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td style="text-align: center;">0.58</td><td>☐ ND</td></tr><tr><td>Chromium:</td><td style="text-align: center;">27</td><td>☐ ND</td></tr><tr><td>Lead:</td><td style="text-align: center;">4200</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td style="text-align: center;">0.58</td><td>☐ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td style="text-align: center;">31</td><td>☐ ND</td></tr><tr><td>Nickel:</td><td style="text-align: center;">23</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td style="text-align: center;">72</td><td>☐ ND</td></tr></table> Comments: Total metals data represents the highest metals concentration across all 4 samples.	Arsenic:		☒ ND	Barium:	260	☐ ND	Cadmium:	0.58	☐ ND	Chromium:	27	☐ ND	Lead:	4200	☐ ND	Mercury:	0.58	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	31	☐ ND	Nickel:	23	☐ ND	Zinc:	72	☐ ND
Arsenic:		☒ ND																																		
Barium:	260	☐ ND																																		
Cadmium:	0.58	☐ ND																																		
Chromium:	27	☐ ND																																		
Lead:	4200	☐ ND																																		
Mercury:	0.58	☐ ND																																		
Selenium:		☒ ND																																		
Silver:		☒ ND																																		
Copper:	31	☐ ND																																		
Nickel:	23	☐ ND																																		
Zinc:	72	☐ ND																																		
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																				
Constituent		Volume (Range %)																																		
Concrete Dust		100																																		
C. LISTED WASTE																																				
☐ Discarded Listed Chemical Product (U or P List):																																				



☐ Listed Source Waste (F or K List):

☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☐ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

For the purposes of Clean Closure in accordance with the Dangerous Waste Regulations, we have identified all of the Dangerous Waste Management Units subject to Clean Closure. The Central Accumulation Area had been identified by historical documents and interviews with facility staff that worked at the facility when it was operational. The CAA been emptied of all Hazardous and Dangerous Waste and cleaned. The concrete berm and floors of the CAA were then cleaned using a hot water pressure washer. Concrete wash water was contained and captured using a vacuum truck. All waste generated from cleaning activities was designated and the designation information is included as a separate waste designation package. For reference waste generated from cleaning of the CAA was non-hazardous.

On 29 May 2020, DH Environmental conducted a sampling effort to determine if containment area of the CAA is considered Clean under WAC 173-303-200(12). The sampling design for the Central Accumulation Area consisted of gridding each area into four quadrants. A minimum of one sample was collected from the concrete floor surface in each of the sampling grids. Some minor staining was present and samples were collected from this area. In grind areas where staining was not present, the sample was collected from the center of each grid as described in the Sampling and Analysis Plan. Samples were collected by using a roto-hammer concrete drill and drilling into the concrete surface approximately 4-inches and extracting the drill bit. The drill cuttings were scraped up onto a dedicated piece of cardstock and placed into laboratory supplied sampling containers. Multiple drill holes were required to obtain sufficient sample volume, in which case the drill holes were located in close proximity to each other.

Representative samples were collected analyzed for total RCRA 8 metals by EPA Methods 6010D (arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, silver, and zinc) and 7471B (mercury); TCLP RCRA 8 metals by EPA methods 1311 (extraction), 6010D (all except mercury), and 7471B (mercury); PCBs by EPA method 8082; VOCs by EPA Method 8260. Even though they were not considered contaminants of concern, PAHs by EPA 8270D was conducted on one of the samples. Some samples exhibited total lead concentrations above 20 times the federal regulatory limit. However, despite the high total concentrations, all samples “passed” the TCLP. In addition, the total analysis of volatiles by EPA 8260C and PAHs by EPA 8270D did not indicate the concrete should designate as characteristic for any RCRA volatiles or semi volatile compounds. Analysis has identified low level trace constituents listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non- Specific Sources. For example, acetone was detected at a highest concentration of 0.26 mg/kg as well as 2-butanone at 0.045 mg/kg and Tetrachloroethene at 0.0032 mg/kg. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents: Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste. After it was determined that no characteristic or listed waste designations should apply to the concrete dust, toxic equivalent concentration calculations were conducted on each sample in accordance with WAC 173-303-100(5). A Washington state toxic criteria book designation calculation was performed for each of the 4 samples taken throughout the floor of the CAA. All samples had an Equivalent Concentration (EC) less than 0.001%, therefore the waste stream has been designated as a non-dangerous waste.



Attachments:

- ☐ Field Report
- ☒ Photo Log
- ☒ Laboratory Data (OnSite Environmental Lab Report 2005-232)
- ☒ Dangerous Waste Toxic Equivalent Concentration Calculation
- ☐ Biological Testing Method 80-12 (Fish Bioassay)
- ☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste

USDOT Proper Shipping Name:

RCRA Waste Codes:

☐ TSCA Regulated Waste

TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description: Non-hazardous waste, solid

Designation Performed by: Stacy Fox, CHMM

Title: Senior Project Scientist

Date: 06-23-2020

Designation Reviewed by: David Hill, PE, CHMM, CPEA

Title: Principal Engineer

Date: 06-23-2020



1011 SW KICKITAT WAY
SUITE 107
SEATTLE, WASHINGTON 98134
(206) 293-3126

FIELD REPORT

File Name:
FR-1_CAA_05292020

Project:
Star Forge – Waste Designation Sampling

Date:
05/29/2020

Owner:
Star Forge

Time of Arrival:
0900

Report Number:
1

Prepared by:
Nathan Moxley

Location:
CAA & Baghouse-North

Time of Departure:
1430

Page:
Page 1 of 1

Purpose of Site Visit:
Waste Designation Sampling

Weather:
Clear, ~70-deg F

Travel/Prep. Time:
2.5 hr.

Project/Contract Number:
Work Order 03 - Clean Closure

Upon arrival to the site I assessed personal safety hazards: ☒ Yes or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable
Safety Hazards Were Addressed by : ☐ Performing toolbox safety meeting ☒ Donning PPE, and observing safety standards

Site Visit Purpose and Details:

To collect samples of the concrete in the CAA and N. end of the baghouse. Samples were collected in accordance with the Clean Closure Sampling Analysis Plan.

Summary of Field Activities:

Nathan Moxley and Brian Johnson of DH Environmental arrived onsite at approximately 0900. Upon arrival we conducted a health and safety tailgate meeting and unloaded sampling equipment. The CAA and Baghouse-N were both divided into quadrants and samples were collected from each quadrant. Samples were collected from areas where staining was observed on the concrete. Samples were collected as prescribed in the SAP, by drilling 8-10 holes in the concrete with a roto-hammer. The dust from each hole was collected on a dedicated piece of cardstock and placed directly into laboratory supplied sampling containers.

Following the collection of each sample, a photo was taken. Photos are provided in the attached photo log.

The samples were hand delivered to Onsite Environmental, in Redmond, WA following chain of custody protocols.

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Field Representative certifies the report was prepared with the intent to portray a true and accurate representation of the work performed or the observations made.

FIELD REPRESENTATIVE:
Nathan Moxley, LHG

DATE:
05/29/2020

☐ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Reviewer certifies the report has been reviewed and is ready for release to the Client to support work product and/or deliverables without exception.

REVIEWED BY:
Stacy Fox, CHMM

DATE:
06/03/2020

This report presents observations and a record of field activities relating to our services only. Other work may have been performed on this project that was not under the direction or guidance of DH Environmental, Inc. Our work did not include supervision or direction of the work of others. DH Environmental, Inc. is not responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by DH Environmental, Inc. and will serve as the official document of record.

ATTACHMENTS:

☒ Site Photos ☐ Sketch ☐ Chain of Custody ☐ Other:
☐ Sample Log ☐ Drawing(s) ☐ Calibration Records

Photo Log
CAA Waste Designation Sampling
5/29/2020
Star Forge, Tukwila, Washington

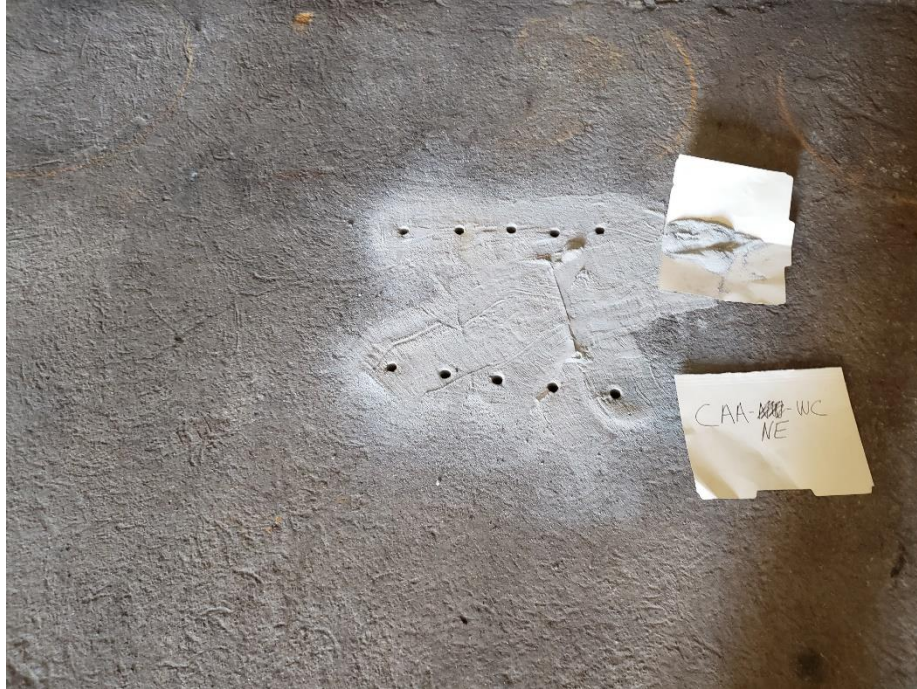


Photo 1: Sample location CAA-NE.



Photo 2: Sample location CAA-NW.



Photo 3: Sample location CAA-SE.



Photo 4: Drilling to collect sample at location CAA-SE.

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-NW-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	230	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	26	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ¹	C				2.60E-03	
Copper	7440-50-8	30	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		3.00E-03			
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C					
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	23	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					2.30E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	69	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			6.90E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ^a	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ^a	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ^a	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ^a	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Acetone	67-64-1	0.26	LC Rat Inhalation 50.10 mg/kg ^a	D					2.60E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ^a	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ^a	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ^a	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ^a	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ^a	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ^a	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ^a	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.044	LD50 Oral Rat 2737 mg/kg ^a	D					4.40E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ^a	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ^a	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ^a	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ^a	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ^a	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ^a	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ^a	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ^a	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ^a	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ^a	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ^a	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ^a	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ^a	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ^a	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ^a	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-NW-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	0.0086	LD50 Rat oral 2590 mg/kg ²	D					8.60E-07
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	76	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	1300	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0030000	0.0069000	0.0026000	0.0023

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.00E-03	6.90E-03	2.60E-03	2.33E-03		
	0.00E+00	3.00E-04	6.90E-05	2.60E-06	2.33E-07	0.0003718	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

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1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	250	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	0.58	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X	5.80E-05				
Chromium	7440-47-3	25	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				2.50E-03	
Copper	7440-50-8	27	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		2.70E-03			
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C					
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	16	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.60E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	72	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			7.20E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.041	LC Rat Inhalation 50.10 mg/kg ¹	D					4.10E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 ^a Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 ^a Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthus arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	53	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	950	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000580	0.0027000	0.0072000	0.0025000	0.0016

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	5.80E-05	2.70E-03	7.20E-03	2.50E-03	1.60E-03		
	5.80E-05	2.70E-04	7.20E-05	2.50E-06	1.60E-07	0.0004027	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-SW-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg	Conversion Factor	Concentration (mass %)					
				0.0001	X	A	B	C	D
TOTAL METALS by 6010C/7471B		CAS	Concentration*	Toxicity ^{Source}	Toxic Category				
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	260	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	27	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ¹	C					2.70E-03
Copper	7440-50-8	25	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		2.50E-03			
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C					
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	23	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.30E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	64	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			6.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0049	LD50 Oral Rat 1200 mg/kg ¹	D					4.90E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-SW-WC' (Lab Report 2005-232)
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	0.0032	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				3.20E-07	
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	0.011	LD50 Rat oral 2590 mg/kg ²	D					1.10E-06
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Applicable Sample IDs: 'CAA-SW-WC' (Lab Report 2005-232)
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	76	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	860	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0025000	0.0064000	0.0027003	0.0023

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.50E-03	6.40E-03	2.70E-03	2.30E-03		
	0.00E+00	2.50E-04	6.40E-05	2.70E-06	2.30E-07	0.0003169	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-SE-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	0.0001		1 mg/kg = 10 ⁻⁴ %			
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	210	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	20	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				2.00E-03	
Copper	7440-50-8	31	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		3.10E-03			
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C					
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	16	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.60E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	52	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			5.20E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.18	LC Rat Inhalation 50.10 mg/kg ¹	D					1.80E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.045	LD50 Oral Rat 2737 mg/kg ¹	D					4.50E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 ^a Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-SE-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	0.0093	LD50 Rat oral 2590 mg/kg ²	D				9.30E-07
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	0.056	1630 mg/kg Oral Rat LD50 ²	D				5.60E-06
1-methylnaphthalene	90-12-0	0.045	1840 mg/kg Oral Rate LD50 ²	D				4.50E-06
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	0.092	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			9.20E-06	
Phenanthrene	85-01-8	0.25	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.50E-05		
Anthracene	120-12-7	0.042	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	4.20E-06			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'CAA-SE-WC' (Lab Report 2005-232)
Sample Date: 05-29-2020
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Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	0.28	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C				2.80E-05	
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	4700	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	2400	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000042	0.0031250	0.0052092	0.0020280	0.0016

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	4.20E-06	3.13E-03	5.21E-03	2.03E-03	1.63E-03		
	4.20E-06	3.13E-04	5.21E-05	2.03E-06	1.63E-07	0.0003710	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 2, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-232

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on May 29, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
Samples Submitted: May 29, 2020
Laboratory Reference: 2005-232
Project: Star Forge

Case Narrative

Samples were collected on May 29, 2020 and received by the laboratory on May 29, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for all samples due to matrix effects.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Nickel is outside control limits due to sample inhomogeneity.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Gasoline	ND	5.2	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Gasoline	ND	5.9	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	92	58-129				
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Gasoline	ND	5.7	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	92	58-129				
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Gasoline	ND	5.5	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	93	58-129				
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Gasoline	ND	5.9	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	92	58-129				
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Gasoline	ND	5.6	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	91	58-129				
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Gasoline	ND	5.5	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	92	58-129				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Gasoline	ND	5.6	NWTPH-Gx	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	58-129				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S1					
Gasoline	ND	5.0	NWTPH-Gx	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	58-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				88	89	58-129		



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Diesel Range Organics	76	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	1300	52	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Diesel Range Organics	53	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	950	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Diesel Range Organics	76	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	860	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Diesel Range Organics	4700	130	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil Range Organics	2400	260	NWTPH-Dx	5-29-20	6-1-20	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				F

Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	87	52	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Diesel Range Organics	ND	130	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	2900	260	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	52	50-150				
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	1200	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	59	50-150				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
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 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Diesel Range Organics	ND	25	NWTPH-Dx	5-29-20	5-29-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	SB0529S1									
	ORIG	DUP								
Diesel Fuel #2	90.4	87.6	NA	NA		NA	NA	3	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						90	89	50-150		



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: CAA-NW-WC						
Laboratory ID: 05-232-01						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.26	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	0.044	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.0086	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	24	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	89	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.041	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0079	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	21	74-131				Q
Toluene-d8	99	78-128				
4-Bromofluorobenzene	97	71-130				



Date of Report: June 2, 2020
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-SW-WC				
Laboratory ID:		05-232-03				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	0.0049	0.0017	EPA 8260D	5-30-20	5-30-20	Y
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	0.0032	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.011	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	25	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	95	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Acetone	0.18	0.010	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0077	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Butanone	0.045	0.0052	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0068	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	



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 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.0093	0.0052	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	41	74-131				Q
Toluene-d8	96	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
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 Laboratory Reference: 2005-232
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.032	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0071	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	32	74-131				Q
Toluene-d8	97	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Acetone	0.050	0.0096	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0072	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0015	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
1,1,2-Trichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	35	74-131				Q
Toluene-d8	96	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Dichlorodifluoromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Acetone	0.014	0.0097	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0073	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0015	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0064	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	



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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	42	74-131				Q
Toluene-d8	98	78-128				
4-Bromofluorobenzene	102	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.018	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0081	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0071	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0022	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	42	74-131				Q
Toluene-d8	97	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.010	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0075	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0530S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0523	0.0483	0.0500	0.0500	105	97	55-126	8	17	
Benzene	0.0478	0.0444	0.0500	0.0500	96	89	65-121	7	16	
Trichloroethene	0.0515	0.0500	0.0500	0.0500	103	100	74-126	3	16	
Toluene	0.0504	0.0483	0.0500	0.0500	101	97	71-121	4	16	
Chlorobenzene	0.0539	0.0523	0.0500	0.0500	108	105	72-123	3	15	
Surrogate:										
Dibromofluoromethane					97	96	74-131			
Toluene-d8					98	98	78-128			
4-Bromofluorobenzene					100	99	71-130			



Date of Report: June 2, 2020
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 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-SE-WC				
Laboratory ID:		05-232-04				
Naphthalene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
2-Methylnaphthalene	0.056	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
1-Methylnaphthalene	0.045	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthylene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Fluorene	0.092	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Phenanthrene	0.25	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Anthracene	0.042	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Fluoranthene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Pyrene	0.28	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]anthracene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Chrysene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[b]fluoranthene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo(j,k)fluoranthene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]pyrene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Dibenz[a,h]anthracene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[g,h,i]perylene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	59	46 - 113				
Pyrene-d10	76	45 - 114				
Terphenyl-d14	85	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Naphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
2-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
1-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthylene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Fluorene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Phenanthrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Chrysene	0.0078	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[b]fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo(j,k)fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Dibenz[a,h]anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[g,h,i]perylene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	70	46 - 113				
Pyrene-d10	88	45 - 114				
Terphenyl-d14	82	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	46 - 113				
Pyrene-d10	90	45 - 114				
Terphenyl-d14	90	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0529S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0621	0.0637	0.0833	0.0833	75	76	60 - 116	3	16	
Acenaphthylene	0.0691	0.0666	0.0833	0.0833	83	80	60 - 125	4	15	
Acenaphthene	0.0696	0.0674	0.0833	0.0833	84	81	60 - 121	3	15	
Fluorene	0.0755	0.0757	0.0833	0.0833	91	91	65 - 126	0	15	
Phenanthrene	0.0749	0.0747	0.0833	0.0833	90	90	65 - 120	0	15	
Anthracene	0.0783	0.0766	0.0833	0.0833	94	92	67 - 125	2	15	
Fluoranthene	0.0788	0.0806	0.0833	0.0833	95	97	66 - 125	2	15	
Pyrene	0.0810	0.0792	0.0833	0.0833	97	95	62 - 125	2	15	
Benzo[a]anthracene	0.0923	0.0879	0.0833	0.0833	111	106	72 - 129	5	15	
Chrysene	0.0756	0.0776	0.0833	0.0833	91	93	66 - 123	3	15	
Benzo[b]fluoranthene	0.0848	0.0772	0.0833	0.0833	102	93	68 - 128	9	15	
Benzo(j,k)fluoranthene	0.0794	0.0839	0.0833	0.0833	95	101	63 - 128	6	16	
Benzo[a]pyrene	0.0830	0.0785	0.0833	0.0833	100	94	66 - 130	6	15	
Indeno(1,2,3-c,d)pyrene	0.0799	0.0799	0.0833	0.0833	96	96	63 - 135	0	15	
Dibenz[a,h]anthracene	0.0804	0.0791	0.0833	0.0833	97	95	65 - 130	2	15	
Benzo[g,h,i]perylene	0.0817	0.0807	0.0833	0.0833	98	97	66 - 127	1	15	
Surrogate:										
2-Fluorobiphenyl					81	75	46 - 113			
Pyrene-d10					93	90	45 - 114			
Terphenyl-d14					88	89	49 - 121			



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Aroclor 1016	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	46-125				
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	46-125				



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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	46-125				
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Aroclor 1016	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	46-125				



Date of Report: June 2, 2020
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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		BH-N-SE				
Laboratory ID:		05-232-07				
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	72	46-125				
Client ID:		BH-N-NE				
Laboratory ID:		05-232-08				
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	61	46-125				



Date of Report: June 2, 2020
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 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Aroclor 1016	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	86	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
SPIKE BLANKS												
Laboratory ID:	SB0529S1											
	SB	SBD	SB	SBD		SB	SBD					
Aroclor 1260	0.455	0.469	0.500	0.500	N/A	91	94	50-134	3	18		
Surrogate:												
DCB						90	89	46-125				



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	230	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.52	EPA 6010D	6-1-20	6-1-20	
Chromium	26	0.52	EPA 6010D	6-1-20	6-1-20	
Copper	30	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.2	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	23	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	69	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	250	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	0.58	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	25	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	27	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	16	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	72	2.6	EPA 6010D	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	260	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	27	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	25	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	23	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	64	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	210	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	20	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	31	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	16	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	52	2.6	EPA 6010D	6-1-20	6-1-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Arsenic	22	10	EPA 6010D	6-1-20	6-1-20	
Barium	47	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.52	EPA 6010D	6-1-20	6-1-20	
Chromium	43	0.52	EPA 6010D	6-1-20	6-1-20	
Copper	24	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	14	5.2	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	15	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	63	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Arsenic	21	10	EPA 6010D	6-1-20	6-1-20	
Barium	48	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	71	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	33	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	59	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	26	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	130	2.6	EPA 6010D	6-1-20	6-1-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Arsenic	16	10	EPA 6010D	6-1-20	6-1-20	
Barium	62	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	1.2	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	55	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	29	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	130	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	22	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	220	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Arsenic	22	10	EPA 6010D	6-1-20	6-1-20	
Barium	67	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	39	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	26	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	33	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	21	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	110	2.6	EPA 6010D	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601SH1					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Chromium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Copper	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.0	EPA 6010D	6-1-20	6-1-20	
Nickel	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Laboratory ID:	MB0601S1					
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

					Source	Percent	Recovery	RPD		
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-232-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	L
Barium	224	237	NA	NA		NA	NA	5	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	25.1	28.5	NA	NA		NA	NA	13	20	
Copper	29.6	29.0	NA	NA		NA	NA	2	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Nickel	22.0	27.2	NA	NA		NA	NA	21	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Zinc	67.1	70.9	NA	NA		NA	NA	5	20	

Laboratory ID: 05-208-01

Mercury	ND	ND	NA	NA		NA	NA	NA	20	
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MATRIX SPIKES

Laboratory ID: 05-232-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	90.6	89.5	100	100	ND	91	90	75-125	1	20
Barium	343	345	100	100	224	119	120	75-125	0	20
Cadmium	44.8	45.0	50.0	50.0	ND	90	90	75-125	0	20
Chromium	99.8	102	100	100	25.1	75	77	75-125	2	20
Copper	77.4	78.1	50.0	50.0	29.6	96	97	75-125	1	20
Lead	205	208	250	250	ND	82	83	75-125	1	20
Nickel	99.9	105	100	100	22.0	78	83	75-125	5	20
Selenium	75.3	87.5	100	100	ND	75	88	75-125	15	20
Silver	20.0	19.9	25.0	25.0	ND	80	79	75-125	1	20
Zinc	157	158	100	100	67.1	90	91	75-125	1	20

Laboratory ID: 05-208-01

Mercury	0.454	0.498	0.500	0.500	0.00500	90	99	80-120	9	20
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.77	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.12	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.76	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.094	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.79	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.11	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.79	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.087	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.21	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.86	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.16	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.22	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.49	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.20	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.12	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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**TCLP METALS
 EPA 1311/6010D/7470A
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID: MB0602TM1						
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID: MB0602T11						
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Laboratory ID: MB0602TM2						
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID: MB0602T2						
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-208-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	ND	ND	NA	NA		NA	NA	NA	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.684	0.654	NA	NA		NA	NA	4	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-208-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.376	0.380	NA	NA		NA	NA	1	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	05-208-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.79	3.78	4.00	4.00	ND	95	95	75-125	0	20
Barium	3.69	3.67	4.00	4.00	ND	92	92	75-125	1	20
Cadmium	1.96	1.95	2.00	2.00	ND	98	98	75-125	1	20
Chromium	4.21	4.21	4.00	4.00	0.684	88	88	75-125	0	20
Lead	8.54	8.50	10.0	10.0	ND	85	85	75-125	0	20
Selenium	3.88	3.91	4.00	4.00	ND	97	98	75-125	1	20
Silver	0.904	0.908	1.00	1.00	ND	90	91	75-125	0	20
Laboratory ID:	05-208-01									
Mercury	0.0490	0.0497	0.0500	0.0500	ND	98	99	75-125	1	20
Laboratory ID:	05-138-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.91	3.91	4.00	4.00	ND	98	98	75-125	0	20
Barium	3.95	3.96	4.00	4.00	0.376	89	90	75-125	0	20
Cadmium	1.94	1.97	2.00	2.00	ND	97	98	75-125	1	20
Chromium	3.36	3.39	4.00	4.00	ND	84	85	75-125	1	20
Lead	8.35	8.35	10.0	10.0	ND	84	84	75-125	0	20
Selenium	3.91	3.83	4.00	4.00	ND	98	96	75-125	2	20
Silver	0.894	0.896	1.00	1.00	ND	89	90	75-125	0	20
Laboratory ID:	05-138-01									
Mercury	0.0472	0.0483	0.0500	0.0500	ND	94	97	75-125	2	20



Date of Report: June 2, 2020
Samples Submitted: May 29, 2020
Laboratory Reference: 2005-232
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
CAA-NW-WC	05-232-01	3	5-29-20
CAA-NE-WC	05-232-02	3	5-29-20
CAA-SW-WC	05-232-03	3	5-29-20
CAA-SE-WC	05-232-04	3	5-29-20
BH-N-SW	05-232-05	4	5-29-20
BH-N-NW	05-232-06	3	5-29-20
BH-N-SE	05-232-07	2	5-29-20
BH-N-NE	05-232-08	2	5-29-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental

Project Number: _____

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Moxley, B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: **05-232**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH	NWTPH	NWTPH	NWTPH	Volatile	Halogen	EDB	Semivol (with lo	PAHs 8	PCBs &	Organ	Organ	Chlorin	Total R	Total M	TCLP M	HEM (o					% Mois
1	CAA-NW-WC	5/29/2020	1050	Solid	5			X	X	X					X				X		X						X
2	CAA-NE-WC		1110																								
3	CAA-SW-WC		1125																								
4	CAA-SE-WC		1145												X												
5	BH-N-SW		1230																								
6	BH-N-NW		1245																								
7	BH-N-SE		1300												X												
8	BH-N-NE		1315																								

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>DH Environmental</u>	<u>5/29/2020</u>	<u>1430</u>	<u>Date to Dave Hill & data@dhenviro.com</u>
<u>[Signature]</u>	<u>OSE</u>	<u>5/29/20</u>	<u>1430</u>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☒ Level III ☐ Level IV ☐		
		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



DANGEROUS WASTE DESIGNATION FORM – Tote Storage Area Clean Closure Designation Sampling

Star Forge, Former Jorgenson Forge Property

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Tote Storage Area (TSA) Clean Closure Designation Sampling

Generation Process: Asphalt dust generated from core samples collected from the containment floor of the TSA performed as part of site Clean Closure activities.

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

No waste will be generated during site demolition.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State:

- ☒ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☐ Liquid (If liquid, indicate if the liquid is:
 ☐ Single Layer
 ☐ Multi-layer

pH:

- ☐ < 2 [D002]
☐ > 2 but < 12.5
☒ N/A ☐ > 12.5 [D002]

Flashpoint:

- ☒ N/A ☐ < 140 °F [D001]
☐ > 140 °F but < 200 °F
☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals		
			mg/kg	ug/kg	ug/L
☐ Ignitable [D001]	☐ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic:	24	☐ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium:	86	☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium:		☒ ND
☐ Toxic [D004 – D043]	☒ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium:	200	☐ ND
List Here:	☐ ≥ 50 ppm [TSCA Regulated]	☐ Lead ≥ 5.0 mg/L [D008]	Lead:	26	☐ ND
	☐ < 1 ppm	☐ Mercury ≥ 0.2 mg/L [D009]	Mercury:		☒ ND
	Note: Results ranged from 15.1 - 40 mg/kg total PCB's. The original source is unknown, and Star Forge is not aware of any PCBs stored, released, or otherwise managed at this location. WPCB code does not apply	☐ Selenium ≥ 1.0 mg/L [D010]	Selenium:		☒ ND
		☐ Silver ≥ 5.0 mg/L [D011]	Silver:		☒ ND
		Check if: ☐ Assumed	Copper:	44	☐ ND
		☒ TCLP Conducted	Nickel:	53	☐ ND
		☐ TCLP Not Conducted	Zinc:	85	☐ ND
		Comments: TCLP analysis was conducted on all samples.	Comments: Total metals data represents the highest metals concentration across all 4 samples.		

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Asphalt Dust	100

C. LISTED WASTE

☐ Discarded Listed Chemical Product (U or P List):



- ☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☐ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

For the purposes of Clean Closure in accordance with the Dangerous Waste Regulations, we have identified all of the Dangerous Waste Management Units subject to Clean Closure. The Tote Storage Area(TSA) had been identified by historical documents and interviews with facility staff that worked at the facility when it was operational. The TSA been emptied of all Hazardous and Dangerous Waste and cleaned. The concrete berm and asphalt floor of the TSA were then cleaned using a hot water pressure washer. Wash water was contained and captured using a vacuum pump. All waste generated from cleaning activities were designated and the designation information is included as a separate waste designation package. For reference waste generated from cleaning of the TSA was non-hazardous.

On June 3, 2020, DH Environmental conducted a sampling effort to determine if containment area of the TSA is considered Clean under WAC 173-303-200(12). The sampling design for the TSA consisted of gridding the area into four quadrants. A minimum of one sample was collected from the asphalt floor surface in each of the sampling grids. Some minor staining was present, and samples were collected from that area. In grind areas where staining was not present, the sample was collected from the center of each grid as described in the Sampling and Analysis Plan. Samples were collected by using a roto-hammer drill and drilling into the asphalt surface approximately 4-inches and extracting the drill bit. The drill cuttings were scraped up onto a dedicated piece of cardstock and placed into laboratory supplied sampling containers. Multiple drill holes were required to obtain sufficient sample volume, in which case the drill holes were located in close proximity to each other.

Analytical results indicated that some samples exhibited total metals concentrations above 20 times the federal regulatory limit. However, despite the high total concentrations, all samples “passed” the TCLP. In addition, the total analysis of volatiles by EPA 8260C did not indicate the asphalt should designate as characteristic for any RCRA volatiles or semi volatile compounds. Analysis has identified low level trace constituents listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non-Specific Sources. For example, acetone was detected at a highest concentration of 0.26 mg/kg, benzene at 0.0014 mg/kg, 1,1,1-Trichloroethane at 0.0018, as well as 2-butanone at 0.081 mg/kg and Xylene at 0.0025 mg/kg. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents: Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste. Concentrations of PCB’s were detected in each of the 4 samples. The levels ranged from 15.1 mg/kg - 40 mg/kg total PCB’s. However, the original source of the PCBs is unknown, and Star Forge is not aware of any PCBs stored, released, or otherwise managed at this location. Therefore, the Washington State WPCB source code listing should not apply to the concrete as the listing applies when the source is from the following, or residues thereof, in accordance with WAC 173-303-9904:

After it was determined that no characteristic or listed waste designations should apply to the dust, toxic equivalent concentration calculations were conducted on each sample in accordance with WAC 173-303-100(5). A Washington state toxic criteria book designation calculation was performed for each of the 4 samples taken throughout the floor of the TSA. All samples had an Equivalent Concentration (EC) less than 0.001%, therefore the waste stream has been designated as a non-dangerous waste.



Attachments:

- ☒ Field Report
- ☒ Photo Log
- ☒ Laboratory Data (OnSite Environmental Lab Report 2005-232)
- ☒ Dangerous Waste Toxic Equivalent Concentration Calculation
- ☐ Biological Testing Method 80-12 (Fish Bioassay)
- ☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste

USDOT Proper Shipping Name:

RCRA Waste Codes:

☐ TSCA Regulated Waste

TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description: Non-hazardous waste, solid

Designation Performed by: Stacy Fox, CHMM

Title: Senior Project Scientist

Date: 06-23-2020

Designation Reviewed by: David Hill, PE, CHMM, CPEA

Title: Principal Engineer

Date: 06-23-2020

Photo Log
Tote Storage Designation Sampling
6/3/2020
Star Forge, Tukwila, Washington



Photo 1: Tote Storage Building slab following cleaning. View to the west.



Photo 2: Sample location TS-NE-WC.



Photo 3: Sample location TS-NW-WC.



Photo 4: Sample location TS-SE-WC.



Photo 5: Sample location TS-SW-WC.

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	58	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	30	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				3.00E-03	
Copper	7440-50-8	34	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		3.40E-03			
Lead	7439-92-1	7.5	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				7.50E-04	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	31	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.10E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	38	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.80E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.057	LC Rat Inhalation 50.10 mg/kg ¹	D					5.70E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.013	LD50 Oral Rat 2737 mg/kg ¹	D					1.30E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	0.0018	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					1.80E-07
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	0.0014	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				1.40E-07	
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	0.0025	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			2.50E-07	
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	22	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			2.20E-03	
Aroclor 1260	11096-82-5	18	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B			1.80E-03	
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	20000	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0034000	0.0078000	0.0037504	0.0031

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.40E-03	7.80E-03	3.75E-03	3.11E-03		
	0.00E+00	3.40E-04	7.80E-05	3.75E-06	3.11E-07	0.0004221	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-NW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁴-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	12	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.20E-03		
Barium	7440-39-3	74	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	66	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				6.60E-03	
Copper	7440-50-8	32	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		3.20E-03			
Lead	7439-92-1	8.5	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				8.50E-04	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	36	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.60E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	85	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			8.50E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ⁴	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.33	LC Rat Inhalation 50.10 mg/kg ¹	D					3.30E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0062	LD50 Oral Rat 1200 mg/kg ¹	D					6.20E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.081	LD50 Oral Rat 2737 mg/kg ¹	D					8.10E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-NW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	0.015	LD50 Rat oral 2590 mg/kg ²	D			1.50E-06
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	8.5	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		8.50E-04	
Aroclor 1260	11096-82-5	6.6	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		6.60E-04	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-NW-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	15000	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0032000	0.0112100	0.0074500	0.0036

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.20E-03	1.12E-02	7.45E-03	3.64E-03		
	0.00E+00	3.20E-04	1.12E-04	7.45E-06	3.64E-07	0.0004399	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'TS-NE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	76	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	42	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				4.20E-03	
Copper	7440-50-8	32	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		3.20E-03			
Lead	7439-92-1	10	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.00E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	31	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					3.10E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	51	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			5.10E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ^a	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ^a	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ^a	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ^a	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Acetone	67-64-1	0.11	LC Rat Inhalation 50.10 mg/kg ^a	D					1.10E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0051	LD50 Oral Rat 1200 mg/kg ^a	D					5.10E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ^a	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ^a	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ^a	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ^a	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ^a	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ^a	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.028	LD50 Oral Rat 2737 mg/kg ^a	D					2.80E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ^a	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ^a	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ^a	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ^a	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ^a	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ^a	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ^a	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ^a	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ^a	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ^a	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ^a	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ^a	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ^a	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ^a	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ^a	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'TS-NE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	8.1	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		8.10E-04	
Aroclor 1260	11096-82-5	7.4	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		7.40E-04	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'TS-NE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	20000	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0032000	0.0066500	0.0052000	0.0031

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.20E-03	6.65E-03	5.20E-03	3.11E-03		
	0.00E+00	3.20E-04	6.65E-05	5.20E-06	3.11E-07	0.0003920	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁴-7 %
 1 mg/kg = 10⁻⁴-4 %

Analyte	Units Displayed as	mg/kg	Concentration*	Toxicity ^{Source}	Toxic Category	Concentration (mass %)			
						X	A	B	C
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	24	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.40E-03		
Barium	7440-39-3	86	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	200	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.00E-02	
Copper	7440-50-8	44	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		4.40E-03			
Lead	7439-92-1	26	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.60E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	53	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					5.30E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	63	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			6.30E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.14	LC Rat Inhalation 50.10 mg/kg ¹	D					1.40E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0046	LD50 Oral Rat 1200 mg/kg ¹	D					4.60E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.037	LD50 Oral Rat 2737 mg/kg ¹	D					3.70E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	12	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.20E-03	
Aroclor 1260	11096-82-5	9.2	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		9.20E-04	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Asphalt
Applicable Sample IDs: 'TS-SE-WC' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	16000	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0044000	0.0108200	0.0226000	0.0053

Enter Category Mass % Here	→	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
		0.00E+00	4.40E-03	1.08E-02	2.26E-02	5.32E-03		
		0.00E+00	4.40E-04	1.08E-04	2.26E-05	5.32E-07	0.0005713	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 9, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-050

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 3, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 9, 2020
Samples Submitted: June 3, 2020
Laboratory Reference: 2006-050
Project: Star Forge

Case Narrative

Samples were collected on June 3, 2020 and received by the laboratory on June 3, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for samples BH-S-SE, BH-S-SW, BH-S-M-E, BH-S-M-W, BH-S-NE, and BH-S-NW due to sample matrix effects.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Gasoline	ND	5.4	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	84	58-129				
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Gasoline	ND	5.6	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	85	58-129				
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Gasoline	ND	4.9	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	58-129				
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Gasoline	ND	5.8	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Gasoline	ND	5.3	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Gasoline	ND	5.2	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Gasoline	ND	5.3	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	87	58-129				



Date of Report: June 9, 2020
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 Project: Star Forge

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Gasoline	ND	5.2	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Gasoline	ND	5.9	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Gasoline	ND	6.0	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S1					
Gasoline	ND	5.0	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	58-129				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-050-01									
	ORIG	DUP								
Gasoline	ND	ND	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						84	86	58-129		



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	20000	2500	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Diesel Range Organics	ND	1400	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	15000	2700	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	20000	2600	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	16000	2700	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil	220	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	71	50-150				

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				

Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Diesel Range Organics	ND	26	NWTPH-Dx	6-8-20	6-8-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-8-20	6-8-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
Diesel Range Organics	ND	25	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-4-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				
Laboratory ID:	MB0608S3					
Diesel Range Organics	ND	25	NWTPH-Dx	6-8-20	6-8-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-8-20	6-8-20	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	96	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	SB0604S1							
	ORIG	DUP						
Diesel Fuel #2	91.6	82.3	NA	NA	NA	11	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				104	94	50-150		
Laboratory ID:	SB0608S3							
	ORIG	DUP						
Diesel Fuel #2	82.8	81.7	NA	NA	NA	1	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				96	98	50-150		



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0079	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Acetone	0.057	0.012	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0075	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0074	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Butanone	0.013	0.0076	EPA 8260D	6-4-20	6-4-20	Y
Bromochloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	0.0018	0.0012	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Benzene	0.0014	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	0.0025	0.0024	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.054	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.27	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.27	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	120	74-131				
Toluene-d8	82	78-128				
4-Bromofluorobenzene	74	71-130				



Date of Report: June 9, 2020
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VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.010	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Acetone	0.33	0.015	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	0.0062	0.0015	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0097	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0095	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Butanone	0.081	0.0098	EPA 8260D	6-3-20	6-4-20	Y
Bromochloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
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 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	0.015	0.0076	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0030	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.056	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.28	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.28	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.28	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	74-131				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	79	71-130				



Date of Report: June 9, 2020
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VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0079	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Acetone	0.11	0.012	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	0.0051	0.0012	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0075	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Butanone	0.028	0.0077	EPA 8260D	6-3-20	6-4-20	Y
Bromochloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	



Date of Report: June 9, 2020
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 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0024	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.049	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.25	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.25	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	101	74-131				
Toluene-d8	89	78-128				
4-Bromofluorobenzene	73	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0092	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Acetone	0.14	0.014	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	0.0046	0.0014	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0088	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0087	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Butanone	0.037	0.0089	EPA 8260D	6-4-20	6-4-20	Y
Bromochloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Benzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	ND	0.0027	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.058	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.29	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.29	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	85	74-131				
Toluene-d8	88	78-128				
4-Bromofluorobenzene	73	71-130				



Date of Report: June 9, 2020
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.025	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0067	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0069	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0021	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	41	74-131				Q
Toluene-d8	103	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 9, 2020
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 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0074	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.029	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	37	74-131				Q
Toluene-d8	106	78-128				
4-Bromofluorobenzene	99	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0074	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.017	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	44	74-131				Q
Toluene-d8	112	78-128				
4-Bromofluorobenzene	109	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Acetone	ND	0.010	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0065	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0064	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0066	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	34	74-131				Q
Toluene-d8	102	78-128				
4-Bromofluorobenzene	97	71-130				



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.020	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0069	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	33	74-131				Q
Toluene-d8	106	78-128				
4-Bromofluorobenzene	103	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.016	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0073	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0023	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	14	74-131				Q
Toluene-d8	102	78-128				
4-Bromofluorobenzene	97	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloromethane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromomethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloroethane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Acetone	ND	0.013	EPA 8260D	6-3-20	6-3-20	
Iodomethane	ND	0.0080	EPA 8260D	6-3-20	6-3-20	
Carbon Disulfide	ND	0.0019	EPA 8260D	6-3-20	6-3-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Vinyl Acetate	ND	0.0074	EPA 8260D	6-3-20	6-3-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Butanone	ND	0.0067	EPA 8260D	6-3-20	6-3-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloroform	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Benzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichloroethane	ND	0.0020	EPA 8260D	6-3-20	6-3-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Toluene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-3-20	6-3-20	
o-Xylene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Styrene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromoform	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Naphthalene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0067	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Acetone	ND	0.010	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0064	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0063	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Butanone	ND	0.0065	EPA 8260D	6-4-20	6-4-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Benzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	



Date of Report: June 9, 2020
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 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Naphthalene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-130</i>				



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0603S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0457	0.0499	0.0500	0.0500	91	100	55-126	9	17	
Benzene	0.0427	0.0448	0.0500	0.0500	85	90	65-121	5	16	
Trichloroethene	0.0494	0.0513	0.0500	0.0500	99	103	74-126	4	16	
Toluene	0.0456	0.0487	0.0500	0.0500	91	97	71-121	7	16	
Chlorobenzene	0.0532	0.0537	0.0500	0.0500	106	107	72-123	1	15	
Surrogate:										
Dibromofluoromethane					96	95	74-131			
Toluene-d8					102	100	78-128			
4-Bromofluorobenzene					97	86	71-130			
Laboratory ID: SB0604S1										
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0428	0.0445	0.0500	0.0500	86	89	55-126	4	17	
Benzene	0.0400	0.0420	0.0500	0.0500	80	84	65-121	5	16	
Trichloroethene	0.0461	0.0511	0.0500	0.0500	92	102	74-126	10	16	
Toluene	0.0435	0.0471	0.0500	0.0500	87	94	71-121	8	16	
Chlorobenzene	0.0473	0.0501	0.0500	0.0500	95	100	72-123	6	15	
Surrogate:										
Dibromofluoromethane					97	96	74-131			
Toluene-d8					106	108	78-128			
4-Bromofluorobenzene					99	96	71-130			



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Naphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
2-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
1-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Acenaphthylene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Acenaphthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Fluorene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Phenanthrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[a]anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Chrysene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[b]fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo(j,k)fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[a]pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Dibenz[a,h]anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[g,h,i]perylene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	75	46 - 113				
Pyrene-d10	90	45 - 114				
Terphenyl-d14	87	49 - 121				



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 Samples Submitted: June 3, 2020
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 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0605S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	46 - 113				
Pyrene-d10	86	45 - 114				
Terphenyl-d14	85	49 - 121				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
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 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0605S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0765	0.0724	0.0833	0.0833	92	87	60 - 116	6	16	
Acenaphthylene	0.0880	0.0847	0.0833	0.0833	106	102	60 - 125	4	15	
Acenaphthene	0.0839	0.0813	0.0833	0.0833	101	98	60 - 121	3	15	
Fluorene	0.0932	0.0831	0.0833	0.0833	112	100	65 - 126	11	15	
Phenanthrene	0.0907	0.0778	0.0833	0.0833	109	93	65 - 120	15	15	
Anthracene	0.0949	0.0871	0.0833	0.0833	114	105	67 - 125	9	15	
Fluoranthene	0.0939	0.0890	0.0833	0.0833	113	107	66 - 125	5	15	
Pyrene	0.0927	0.0870	0.0833	0.0833	111	104	62 - 125	6	15	
Benzo[a]anthracene	0.0939	0.0873	0.0833	0.0833	113	105	72 - 129	7	15	
Chrysene	0.0939	0.0860	0.0833	0.0833	113	103	66 - 123	9	15	
Benzo[b]fluoranthene	0.0874	0.0825	0.0833	0.0833	105	99	68 - 128	6	15	
Benzo(j,k)fluoranthene	0.0985	0.0907	0.0833	0.0833	118	109	63 - 128	8	16	
Benzo[a]pyrene	0.0981	0.0879	0.0833	0.0833	118	106	66 - 130	11	15	
Indeno(1,2,3-c,d)pyrene	0.0903	0.0856	0.0833	0.0833	108	103	63 - 135	5	15	
Dibenz[a,h]anthracene	0.0842	0.0806	0.0833	0.0833	101	97	65 - 130	4	15	
Benzo[g,h,i]perylene	0.0923	0.0854	0.0833	0.0833	111	103	66 - 127	8	15	
Surrogate:										
2-Fluorobiphenyl					85	87	46 - 113			
Pyrene-d10					106	97	45 - 114			
Terphenyl-d14					101	92	49 - 121			



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: TS-SW-WC						
Laboratory ID:	06-050-01					
Aroclor 1016	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	22	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	18	5.1	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S
Client ID: TS-NW-WC						
Laboratory ID:	06-050-02					
Aroclor 1016	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	8.5	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	6.6	1.1	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S
Client ID: TS-NE-WC						
Laboratory ID:	06-050-03					
Aroclor 1016	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	8.1	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	7.4	1.0	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S



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 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Aroclor 1016	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	12	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	9.2	1.1	EPA 8082A	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	46-125				S
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	100	46-125				
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Aroclor 1016	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	99	46-125				



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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	88	46-125				
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	94	46-125				
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	103	46-125				



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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Aroclor 1016	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>89</i>	<i>46-125</i>				



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 Samples Submitted: June 3, 2020
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 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S2					
Aroclor 1016	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	103	46-125				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	06-050-05										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.466	0.496	0.500	0.500	ND	93	99	43-125	6	15	
Surrogate:											
DCB						95	97	46-125			



Date of Report: June 9, 2020
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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	58	2.5	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	30	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	34	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	7.5	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.25	EPA 7471B	6-8-20	6-8-20	
Nickel	31	2.5	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	38	2.5	EPA 6010D	6-4-20	6-4-20	

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Arsenic	12	11	EPA 6010D	6-4-20	6-4-20	
Barium	74	2.7	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.54	EPA 6010D	6-4-20	6-4-20	
Chromium	66	0.54	EPA 6010D	6-4-20	6-4-20	
Copper	32	1.1	EPA 6010D	6-4-20	6-4-20	
Lead	8.5	5.4	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.27	EPA 7471B	6-8-20	6-8-20	
Nickel	36	2.7	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	11	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.1	EPA 6010D	6-4-20	6-4-20	
Zinc	85	2.7	EPA 6010D	6-4-20	6-4-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	76	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	42	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	32	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	10	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	31	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	51	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Arsenic	24	11	EPA 6010D	6-4-20	6-4-20	
Barium	86	2.7	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.53	EPA 6010D	6-4-20	6-4-20	
Chromium	200	0.53	EPA 6010D	6-4-20	6-4-20	
Copper	44	1.1	EPA 6010D	6-4-20	6-4-20	
Lead	26	5.3	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.27	EPA 7471B	6-8-20	6-8-20	
Nickel	53	2.7	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	11	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.1	EPA 6010D	6-4-20	6-4-20	
Zinc	63	2.7	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Arsenic	17	10	EPA 6010D	6-4-20	6-4-20	
Barium	54	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	23	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	20	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	9.8	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	16	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	57	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Arsenic	15	10	EPA 6010D	6-4-20	6-4-20	
Barium	47	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	21	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	19	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	15	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	64	2.6	EPA 6010D	6-4-20	6-4-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Arsenic	18	10	EPA 6010D	6-4-20	6-4-20	
Barium	64	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	27	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	24	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	19	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	62	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Arsenic	17	10	EPA 6010D	6-4-20	6-4-20	
Barium	47	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	21	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	19	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	14	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	55	2.6	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Arsenic	19	10	EPA 6010D	6-4-20	6-4-20	
Barium	48	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	0.72	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	150	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	40	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	86	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	49	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	200	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Arsenic	18	10	EPA 6010D	6-4-20	6-4-20	
Barium	46	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	36	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	23	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	23	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	19	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	79	2.6	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604SH1					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.50	EPA 6010D	6-4-20	6-4-20	
Chromium	ND	0.50	EPA 6010D	6-4-20	6-4-20	
Copper	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	ND	5.0	EPA 6010D	6-4-20	6-4-20	
Nickel	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Laboratory ID:	MB0608S1					
Mercury	ND	0.25	EPA 7471B	6-8-20	6-8-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

					Source	Percent	Recovery	RPD		
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-229-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	C
Barium	51.6	50.2	NA	NA		NA	NA	3	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	19.2	18.0	NA	NA		NA	NA	7	20	
Copper	21.5	21.6	NA	NA		NA	NA	0	20	
Lead	5.15	6.45	NA	NA		NA	NA	22	20	
Nickel	26.5	23.3	NA	NA		NA	NA	13	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Zinc	45.2	42.4	NA	NA		NA	NA	6	20	

Laboratory ID: 06-073-01

Mercury	ND	ND	NA	NA		NA	NA	NA	20	
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MATRIX SPIKES

Laboratory ID: 05-229-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	88.6	89.0	100	100	ND	89	89	75-125	1	20
Barium	138	141	100	100	51.6	86	89	75-125	2	20
Cadmium	41.6	41.8	50.0	50.0	ND	83	84	75-125	0	20
Chromium	104	108	100	100	19.2	85	89	75-125	4	20
Copper	69.5	66.6	50.0	50.0	21.5	96	90	75-125	4	20
Lead	214	224	250	250	5.15	84	88	75-125	4	20
Nickel	108	108	100	100	26.5	81	82	75-125	0	20
Selenium	86.0	86.2	100	100	ND	86	86	75-125	0	20
Silver	22.5	22.9	25.0	25.0	ND	90	91	75-125	2	20
Zinc	126	123	100	100	45.2	81	78	75-125	2	20

Laboratory ID: 06-073-01

Mercury	0.551	0.570	0.500	0.500	0.0597	98	102	80-120	3	20
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.65	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.054	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.29	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.63	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.054	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.57	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.12	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.078	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.077	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.22	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.10	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.11	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.26	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.10	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.25	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.14	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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**TCLP METALS
 EPA 1311/6010D/7470A
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID: MB0605TM1						
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	
Laboratory ID: MB0605T1						
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Laboratory ID: MB0605TM2						
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	
Laboratory ID: MB0605T2						
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	06-050-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.654	0.652	NA	NA		NA	NA	0	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.0542	0.0556	NA	NA		NA	NA	3	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-050-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	06-050-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.99	3.98	4.00	4.00	ND	100	100	75-125	0	20
Barium	4.18	4.23	4.00	4.00	0.654	88	89	75-125	1	20
Cadmium	1.90	1.91	2.00	2.00	ND	95	95	75-125	1	20
Chromium	3.73	3.75	4.00	4.00	0.0542	92	92	75-125	1	20
Lead	8.92	8.93	10.0	10.0	ND	89	89	75-125	0	20
Selenium	3.97	3.94	4.00	4.00	ND	99	98	75-125	1	20
Silver	0.906	0.906	1.00	1.00	ND	91	91	75-125	0	20
Laboratory ID:	06-050-01									
Mercury	0.0479	0.0478	0.0500	0.0500	ND	96	96	75-125	0	20



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
TS-SW-WC	06-050-01	1	6-3-20
TS-NW-WC	06-050-02	8	6-3-20
TS-NE-WC	06-050-03	3	6-3-20
TS-SE-WC	06-050-04	6	6-3-20
BH-S-SE	06-050-05	2	6-3-20
BH-S-SW	06-050-06	3	6-3-20
BH-S-M-E	06-050-07	2	6-3-20
BH-S-M-W	06-050-08	2	6-3-20
BH-S-NE	06-050-09	3	6-3-20
BH-S-NW	06-050-10	4	6-3-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
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Chain of Custody

Page 1 of 1

Company: **OH Environmental**
Project Number:
Project Name: **Star Forge**
Project Manager: **Dave Hill**
Sampled by: **Brian Johnson**

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day
☒ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 06-050

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals + Cu, Ni, Zn	Total MTCA Metals	TCLP Metals (RCRA 8)	HEM (oil and grease) 1664A	% Moisture	
1	TS-SW-WC	6-3-20	0930	Solid	5			X	X	X						X				X	X			X
2	TS-NW-WC		0950																					
3	TS-NE-WC		1020																					
4	TS-SE-WC		1055																					
5	BH-S-SE		1135																					
6	BH-S-SW		1220																					
7	BH-S-M-E		1250																					
8	BH-S-M-W		1325												X									
9	BH-S-NE		1355																					
10	BH-S-NW		1430																					

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		OH Env.	6-3-20	1600	
Received		OSE	6/3/20	1600	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard ☐ Level III ☐ Level IV ☐ Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



DANGEROUS WASTE DESIGNATION FORM – Baghouse Clean Closure Designation Sampling

Star Forge, Former Jorgenson Forge Property

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name Baghouse Area(BHA) Clean Closure Designation Sampling

Generation Process: Concrete dust generated from concrete core samples collected from floor of the Baghouse Area performed as part of site Clean Closure activities.

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

No waste will be generated during site demolition.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State:

- ☒ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☐ Liquid (If liquid, indicate if the liquid is:
☐ Single Layer
☐ Multi-layer

pH:

- ☐ < 2 [D002]
☐ > 2 but < 12.5
☒ N/A ☐ > 12.5 [D002]

Flashpoint:

- ☐ < 140 °F [D001]
☐ > 140 °F but < 200 °F
☒ N/A ☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals
			mg/kg ug/kg mg/L ug/L
☐ Ignitable [D001]	☒ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic: 22 ☐ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium: 72 ☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium: 1.2 ☐ ND
☐ Toxic [D004 – D043]	☐ ≥ 2 ppm and < 50 ppm	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium: 150 ☐ ND
List Here:	[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Lead ≥ 5.0 mg/L [D008]	Lead: 130 ☐ ND
	☐ ≥ 50 ppm [TSCA Regulated]	☐ Mercury ≥ 0.2 mg/L [D009]	Mercury: ☒ ND
	☐ < 1 ppm	☐ Selenium ≥ 1.0 mg/L [D010]	Selenium: ☒ ND
	Note:	☐ Silver ≥ 5.0 mg/L [D011]	Silver: ☒ ND
	IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted	Copper: 40 ☐ ND
		Comments: All samples passed TCLP	Nickel: 29 ☐ ND
			Zinc: 220 ☐ ND
			Comments: Total metals data represents the highest metals concentration across all samples.

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Concrete Dust	100

C. LISTED WASTE

☐ Discarded Listed Chemical Product (U or P List):



☒ Listed Source Waste (F or K List): **K061**

☐ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☐ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

For the purposes of Clean Closure in accordance with the Dangerous Waste Regulations, we have identified all of the Dangerous Waste Management Units subject to Clean Closure. The Baghouse had been identified by historical documents and interviews with facility staff that worked at the facility when it was operational and includes the approximately 4,000 SF baghouse building and related equipment, including the baghouse tunnel, that conveyed air and dust from the melt shop to the baghouse. In addition, the baghouse processing area and concrete slab is divided by a wall thereby creating two separate areas denoted as Baghouse North and Baghouse South and electrical utility trench that runs along the eastern perimeter of the baghouse was found to have significant sediment accumulation presumably contaminated with baghouse dust. The baghouse dust was designated as a K061 waste stream as it meets the definition of K061 Specific Source Waste from iron and steel sources in accordance with WAC 173-303-9904.

The BHA has been emptied of all Hazardous and Dangerous Waste and cleaned. From December 2019 to March 2020, Clean Harbors Environmental Services conducted extensive dust removal and cleaning of the baghouse equipment. The baghouse equipment, including the baghouse tunnel was cleaned to Alternative Treatment Standards using a combination of high-pressure steam and water sprays and physical scrubbing. The utility trench and concrete slab of the baghouse was cleaned using high pressure steam and water sprays in June 2020 by DH Environmental as part of the baghouse DWMU evaluation. Approximately 119,000 lbs of dust and debris was removed and disposed of off-site from the baghouse tunnel and the baghouse structures. Since K061 Listed Hazardous Waste Code, all waste generated from cleaning activities was designated as K061 and managed as such offsite.

On June 3, 2020, DH Environmental conducted a sampling effort to determine if containment area of the BHA is considered Clean under WAC 173-303-200(12). The sampling design for the BHA consisted of gridding each area into four quadrants. A minimum of one sample was collected from the concrete floor surface in each of the sampling grids. Some minor staining was present, and samples were collected from this area. In grind areas where staining was not present, the sample was collected from the center of each grid as described in the Sampling and Analysis Plan. Samples were collected by using a roto-hammer concrete drill and drilling into the concrete surface approximately 4-inches and extracting the drill bit. The drill cuttings were scraped up onto a dedicated piece of cardstock and placed into laboratory supplied sampling containers. Multiple drill holes were required to obtain sufficient sample volume, in which case the drill holes were located in close proximity to each other.

Some representative samples exhibited total metals concentrations above 20 times the federal regulatory limit. However, despite the high total concentrations, all samples “passed” the TCLP. In addition, the total analysis of volatiles by EPA 8260C and PAHs by EPA 8270D did not indicate the concrete should designate as characteristic for any RCRA volatiles or semi volatile compounds. Analysis has identified low level trace constituents listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non- Specific Sources. For example, acetone was detected at a highest concentration of 0.05 mg/kg. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents: Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not an F-listed hazardous waste.



Based on the results, we have concluded that the "Baghouse North" concrete slab designates as a K061 listed waste and should be considered hazardous debris subject to further contamination or removal.

Pursuant to 40 CFR Appendix VII to Part 261 - Basis for Listing Hazardous Waste, K061 is listed for hexavalent chromium, lead, and cadmium. Therefore, we propose that the basis for listing and/or delisting the concrete debris associated with the Baghouse DWMU should be demonstration that the concrete concentrations of hexavalent chromium, lead, and cadmium are below MTCA Method A levels for unrestricted land use. The concentrations of lead and cadmium are below the MTCA Method A levels of 250 mg/kg and 2 mg/kg, respectively. The concentration of trivalent chromium is well below the MTCA Method A level of 2,000 mg/kg. However, hexavalent chromium was found in one location in the Baghouse North at 24 mg/kg, which is above the 19 mg/kg, MTCA Method A cleanup level. The Baghouse concrete containment also exceeds MTCA Method A unrestricted cleanup levels for diesel range hydrocarbons.

Attachments:

☐ Field Report

☒ Photo Log

☒ Laboratory Data (OnSite Environmental Lab Report 2005-232, 2005-232B)

☒ Dangerous Waste Toxic Equivalent Concentration Calculation

☐ Biological Testing Method 80-12 (Fish Bioassay)

☐ Other:

F. WASTE DESIGNATION SUMMARY

☒ RCRA Hazardous Waste

RCRA Waste Codes: *K061*

☐ TSCA Regulated Waste

TSCA Description:

☐ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description:

Designation Performed by: *Stacy Fox, CHMM*

Title: *Senior Project Scientist*

Date: *06-30-2020*

Designation Reviewed by: *David Hill, PE, CHMM, CPEA*

Title: *Principal Engineer*

Date: *06-30-2020*

Photo Log
Baghouse Designation Sampling
5/29/2020 (Baghouse North) and 6/3/2020 (Baghouse South)
Star Forge, Tukwila, Washington



Photo 1: Sample location BH-N-NE.



Photo 2: Sample location BH-N-NW.



Photo 3: Sample location BH-N-SE.



Photo 4: Sample location BH-N-SW.



Photo 5: Sample location BH-S-NE.



Photo 6: Sample location BH-S-M-W.



Photo 7: Sample location BH-S-M-E.



Photo 8: Sample location BH-S-SW.



Photo 9: Sample location BH-S-SE.



Photo 10: Sample location BH-NE-Trench-WC-01.



Photo 11: Sample location BH-SE-Trench-WC-02.



Photo 12: Sample location BH-SE-Trench-WC-03.

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-SW' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
		0.0001	1 mg/kg = 10^-4 %						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	22	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B			2.20E-03		
Barium	7440-39-3	47	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	43	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				4.30E-03	
Copper	7440-50-8	24	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		2.40E-03			
Lead	7439-92-1	14	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.40E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	15	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.50E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	63	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			6.30E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ^a	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ^a	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ^a	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ^a	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Acetone	67-64-1	0.032	LC Rat Inhalation 50.10 mg/kg ^a	D					3.20E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ^a	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ^a	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ^a	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ^a	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ^a	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ^a	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ^a	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ^a	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ^a	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ^a	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ^a	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ^a	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ^a	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ^a	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ^a	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ^a	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ^a	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ^a	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ^a	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ^a	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ^a	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ^a	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ^a	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-SW' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-SW' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	87	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0024000	0.0085000	0.0057000	0.0015

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.40E-03	8.50E-03	5.70E-03	1.50E-03		
	0.00E+00	2.40E-04	8.50E-05	5.70E-06	1.50E-07	0.0003309	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-NW' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	21	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.10E-03		
Barium	7440-39-3	48	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	71	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				7.10E-03	
Copper	7440-50-8	33	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		3.30E-03			
Lead	7439-92-1	59	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				5.90E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	26	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.60E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	130	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.30E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.050	LC Rat Inhalation 50.10 mg/kg ¹	D					5.00E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-NW' (Lab Report 2005-232)
Sample Date: 05-29-2020
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-NW' (Lab Report 2005-232)
Sample Date: 05-29-2020
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	2900	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0033000	0.0151000	0.0130000	0.0026

Enter Category Mass % Here	→	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
		0.00E+00	3.30E-03	1.51E-02	1.30E-02	2.61E-03		
		0.00E+00	3.30E-04	1.51E-04	1.30E-05	2.61E-07	0.0004943	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-SE' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor		1 mg/kg = 10 ⁻⁴ %				
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	16	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.60E-03		
Barium	7440-39-3	62	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	1.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	1.20E-04				
Chromium	7440-47-3	55	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.50E-03	
Copper	7440-50-8	29	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		2.90E-03			
Lead	7439-92-1	130	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.30E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	22	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.20E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	220	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.20E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.014	LC Rat Inhalation 50.10 mg/kg ¹	D					1.40E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	0.0078	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C				7.80E-07	
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0001200	0.0029000	0.0236000	0.0185008	0.0022

Enter Category Mass % Here →					EC	Designation
ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000		
1.20E-04	2.90E-03	2.36E-02	1.85E-02	2.20E-03		
1.20E-04	2.90E-04	2.36E-04	1.85E-05	2.20E-07	0.0006647	Non-Dangerous Waste

- Sources
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*Concentration assumed from highest possible value from all samples

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Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-NE' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁴-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	22	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.20E-03		
Barium	7440-39-3	67	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	39	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				3.90E-03	
Copper	7440-50-8	26	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		2.60E-03			
Lead	7439-92-1	33	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				3.30E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	21	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.10E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	110	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.10E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.018	LC Rat Inhalation 50.10 mg/kg ¹	D					1.80E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-N-NE' (Lab Report 2005-232)
Sample Date: 05-29-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	1200	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0026000	0.0132000	0.0072000	0.0021

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.60E-03	1.32E-02	7.20E-03	2.10E-03		
	0.00E+00	2.60E-04	1.32E-04	7.20E-06	2.10E-07	0.0003994	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

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1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %				
	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	17	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.70E-03		
Barium	7440-39-3	54	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	23	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.30E-03	
Copper	7440-50-8	20	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		2.00E-03			
Lead	7439-92-1	9.8	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				9.80E-04	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	16	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.60E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	57	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			5.70E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.025	LC Rat Inhalation 50.10 mg/kg ¹	D					2.50E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	220	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0020000	0.0074000	0.0032800	0.0016

Enter Category Mass % Here →										
	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation			
	0.00E+00	2.00E-03	7.40E-03	3.28E-03	1.60E-03					
	0.00E+00	2.00E-04	7.40E-05	3.28E-06	1.60E-07	0.0002774	Non-Dangerous Waste			

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-SW' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁴-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	15	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B			1.50E-03		
Barium	7440-39-3	47	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	21	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				2.10E-03	
Copper	7440-50-8	19	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		1.90E-03			
Lead	7439-92-1	12	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.20E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	15	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.50E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	64	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			6.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.029	LC Rat Inhalation 50.10 mg/kg ¹	D					2.90E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-SW' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-SW' (Lab Report 2006-050)
Sample Date: 06-03-2020
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0019000	0.0079000	0.0033000	0.0015

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	0.00E+00	1.90E-03	7.90E-03	3.30E-03	1.50E-03	0.0002725	Non-Dangerous Waste
	0.00E+00	1.90E-04	7.90E-05	3.30E-06	1.50E-07		

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-M-E' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	18	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B			1.80E-03		
Barium	7440-39-3	64	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	27	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				2.70E-03	
Copper	7440-50-8	24	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		2.40E-03			
Lead	7439-92-1	12	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.20E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	19	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.90E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	62	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			6.20E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.017	LC Rat Inhalation 50.10 mg/kg ¹	D					1.70E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0024000	0.0080000	0.0039000	0.0019

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.40E-03	8.00E-03	3.90E-03	1.90E-03		
	0.00E+00	2.40E-04	8.00E-05	3.90E-06	1.90E-07	0.0003241	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-M-W' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁴-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	17	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.70E-03		
Barium	7440-39-3	47	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	21	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.10E-03	
Copper	7440-50-8	19	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		1.90E-03			
Lead	7439-92-1	12	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.20E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	14	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.40E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	55	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			5.50E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ⁴	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
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Applicable Sample IDs: 'BH-S-M-W' (Lab Report 2006-050)
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
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Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0019000	0.0072000	0.0033000	0.0014

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.90E-03	7.20E-03	3.30E-03	1.40E-03		
	0.00E+00	1.90E-04	7.20E-05	3.30E-06	1.40E-07	0.0002654	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
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Applicable Sample IDs: 'BH-S-NE' (Lab Report 2006-050)
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1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	19	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B			1.90E-03		
Barium	7440-39-3	48	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	150	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.50E-02	
Copper	7440-50-8	40	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		4.00E-03			
Lead	7439-92-1	86	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				8.60E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	49	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					4.90E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	200	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			2.00E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ^a	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ^a	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ^a	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ^a	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ^a	C					
Acetone	67-64-1	0.020	LC Rat Inhalation 50.10 mg/kg ^a	D					2.00E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ^a	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ^a	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ^a	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ^a	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ^a	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ^a	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ^a	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ^a	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ^a	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ^a	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ^a	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ^a	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ^a	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ^a	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ^a	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ^a	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ^a	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ^a	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ^a	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ^a	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ^a	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ^a	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ^a	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ^a	C					

Project: Star Forge, Former Jorgenson Forge Property
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0040000	0.0219000	0.0236000	0.0049

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	4.00E-03	2.19E-02	2.36E-02	4.90E-03		
	0.00E+00	4.00E-04	2.19E-04	2.36E-05	4.90E-07	0.0006431	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-NW' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	18	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B			1.80E-03		
Barium	7440-39-3	46	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	nd	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	36	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				3.60E-03	
Copper	7440-50-8	23	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		2.30E-03			
Lead	7439-92-1	23	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				2.30E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	19	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.90E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	79	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			7.90E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.016	LC Rat Inhalation 50.10 mg/kg ¹	D					1.60E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-NW' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-S-NW' (Lab Report 2006-050)
Sample Date: 06-03-2020
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Gasoline Range	8052-41-3	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	ND	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	ND	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0023000	0.0097000	0.0059000	0.0019

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.30E-03	9.70E-03	5.90E-03	1.90E-03		
	0.00E+00	2.30E-04	9.70E-05	5.90E-06	1.90E-07	0.0003331	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-NE-Trench-01' (Lab Report 2006-184)
Sample Date: 06-17-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	34	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	16	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				1.60E-03	
Copper	7440-50-8	18	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		1.80E-03			
Lead	7439-92-1	13	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.30E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	11	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.10E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	40	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			4.00E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.023	LC Rat Inhalation 50.10 mg/kg ¹	D					2.30E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0018000	0.0040000	0.0029000	0.0011

Enter Category Mass % Here →										
	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation			
	0.00E+00	1.80E-03	4.00E-03	2.90E-03	1.10E-03					
	0.00E+00	1.80E-04	4.00E-05	2.90E-06	1.10E-07	0.0002230	Non-Dangerous Waste			

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-SE-Trench-02' (Lab Report 2006-184)
Sample Date: 06-17-2020
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
CAS		Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	72	LC50 ³ Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	23	LC50 ³ Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.30E-03	
Copper	7440-50-8	30	LC50 ³ Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		3.00E-03			
Lead	7439-92-1	12	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.20E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	9.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					9.20E-04
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	64	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			6.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.013	LC Rat Inhalation 50.10 mg/kg ¹	D					1.30E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 ³ Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 ³ Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-SE-Trench-02' (Lab Report 2006-184)
Sample Date: 06-17-2020
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-SE-Trench-02' (Lab Report 2006-184)
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0030000	0.0064000	0.0035000	0.0009

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	3.00E-03	6.40E-03	3.50E-03	9.21E-04		
	0.00E+00	3.00E-04	6.40E-05	3.50E-06	9.21E-08	0.0003676	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete
Applicable Sample IDs: 'BH-SE-Trench-03' (Lab Report 2006-184)
Sample Date: 06-17-2020
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1 ng/kg = 10⁻¹⁰ % (mass %)
Conversions 1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg	Conversion Factor	0.0001	1 mg/kg = 10 ⁻⁴ %	Concentration (mass %)			
	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	67	LC50 ^a Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	22	LC50 ^a Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				2.20E-03	
Copper	7440-50-8	28	LC50 ^a Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		2.80E-03			
Lead	7439-92-1	12	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				1.20E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	20	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					2.00E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	54	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			5.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0028000	0.0054000	0.0034000	0.0020

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.80E-03	5.40E-03	3.40E-03	2.00E-03		
	0.00E+00	2.80E-04	5.40E-05	3.40E-06	2.00E-07	0.0003376	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 2, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-232

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on May 29, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
Samples Submitted: May 29, 2020
Laboratory Reference: 2005-232
Project: Star Forge

Case Narrative

Samples were collected on May 29, 2020 and received by the laboratory on May 29, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for all samples due to matrix effects.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Nickel is outside control limits due to sample inhomogeneity.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Gasoline	ND	5.2	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	58-129				
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Gasoline	ND	5.9	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	58-129				
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Gasoline	ND	5.7	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	58-129				
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Gasoline	ND	5.5	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	58-129				
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Gasoline	ND	5.9	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	58-129				
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Gasoline	ND	5.6	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	58-129				
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Gasoline	ND	5.5	NWTPH-Gx	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	58-129				



Date of Report: June 2, 2020
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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Gasoline	ND	5.6	NWTPH-Gx	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	58-129				



Date of Report: June 2, 2020
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 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S1					
Gasoline	ND	5.0	NWTPH-Gx	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	58-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				88	89	58-129		



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
Diesel Range Organics	76	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	1300	52	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
Diesel Range Organics	53	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	950	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Diesel Range Organics	76	26	NWTPH-Dx	5-29-20	6-1-20	N
Lube Oil	860	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Diesel Range Organics	4700	130	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil Range Organics	2400	260	NWTPH-Dx	5-29-20	6-1-20	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				F

Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	87	52	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Diesel Range Organics	ND	130	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	2900	260	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	52	50-150				
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Diesel Range Organics	ND	26	NWTPH-Dx	5-29-20	6-1-20	
Lube Oil	1200	51	NWTPH-Dx	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	59	50-150				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
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 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Diesel Range Organics	ND	25	NWTPH-Dx	5-29-20	5-29-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	SB0529S1									
	ORIG	DUP								
Diesel Fuel #2	90.4	87.6	NA	NA		NA	NA	3	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						90	89	50-150		



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-NW-WC				
Laboratory ID:		05-232-01				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.26	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	0.044	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
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 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NW-WC					
Laboratory ID:	05-232-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.0086	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	24	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	89	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-NE-WC				
Laboratory ID:		05-232-02				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.041	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0079	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



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 Samples Submitted: May 29, 2020
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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-NE-WC					
Laboratory ID:	05-232-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	21	74-131				
Toluene-d8	99	78-128				
4-Bromofluorobenzene	97	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	0.0049	0.0017	EPA 8260D	5-30-20	5-30-20	Y
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	0.0032	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.011	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	25	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	95	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Acetone	0.18	0.010	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0077	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Butanone	0.045	0.0052	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0068	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	0.0093	0.0052	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	41	74-131				Q
Toluene-d8	96	78-128				
4-Bromofluorobenzene	98	71-130				



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 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.032	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0080	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0071	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0021	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0053	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	32	74-131				Q
Toluene-d8	97	78-128				
4-Bromofluorobenzene	98	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Acetone	0.050	0.0096	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0072	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0015	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
1,1,2-Trichloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	35	74-131				Q
Toluene-d8	96	78-128				
4-Bromofluorobenzene	98	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Dichlorodifluoromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Acetone	0.014	0.0097	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0073	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0015	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0064	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0048	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	42	74-131				Q
Toluene-d8	98	78-128				
4-Bromofluorobenzene	102	71-130				



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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Acetone	0.018	0.011	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0081	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0071	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0022	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0054	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	42	74-131				Q
Toluene-d8	97	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.010	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0075	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



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Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0530S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0523	0.0483	0.0500	0.0500	105	97	55-126	8	17	
Benzene	0.0478	0.0444	0.0500	0.0500	96	89	65-121	7	16	
Trichloroethene	0.0515	0.0500	0.0500	0.0500	103	100	74-126	3	16	
Toluene	0.0504	0.0483	0.0500	0.0500	101	97	71-121	4	16	
Chlorobenzene	0.0539	0.0523	0.0500	0.0500	108	105	72-123	3	15	
Surrogate:										
Dibromofluoromethane					97	96	74-131			
Toluene-d8					98	98	78-128			
4-Bromofluorobenzene					100	99	71-130			



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-SE-WC				
Laboratory ID:		05-232-04				
Naphthalene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
2-Methylnaphthalene	0.056	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
1-Methylnaphthalene	0.045	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthylene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Fluorene	0.092	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Phenanthrene	0.25	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Anthracene	0.042	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Fluoranthene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Pyrene	0.28	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]anthracene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Chrysene	ND	0.034	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[b]fluoranthene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo(j,k)fluoranthene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]pyrene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Dibenz[a,h]anthracene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[g,h,i]perylene	ND	0.0069	EPA 8270E/SIM	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	59	46 - 113				
Pyrene-d10	76	45 - 114				
Terphenyl-d14	85	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Naphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
2-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
1-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthylene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Acenaphthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Fluorene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Phenanthrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Chrysene	0.0078	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[b]fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo(j,k)fluoranthene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[a]pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Dibenz[a,h]anthracene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Benzo[g,h,i]perylene	ND	0.0068	EPA 8270E/SIM	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	70	46 - 113				
Pyrene-d10	88	45 - 114				
Terphenyl-d14	82	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	46 - 113				
Pyrene-d10	90	45 - 114				
Terphenyl-d14	90	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0529S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0621	0.0637	0.0833	0.0833	75	76	60 - 116	3	16	
Acenaphthylene	0.0691	0.0666	0.0833	0.0833	83	80	60 - 125	4	15	
Acenaphthene	0.0696	0.0674	0.0833	0.0833	84	81	60 - 121	3	15	
Fluorene	0.0755	0.0757	0.0833	0.0833	91	91	65 - 126	0	15	
Phenanthrene	0.0749	0.0747	0.0833	0.0833	90	90	65 - 120	0	15	
Anthracene	0.0783	0.0766	0.0833	0.0833	94	92	67 - 125	2	15	
Fluoranthene	0.0788	0.0806	0.0833	0.0833	95	97	66 - 125	2	15	
Pyrene	0.0810	0.0792	0.0833	0.0833	97	95	62 - 125	2	15	
Benzo[a]anthracene	0.0923	0.0879	0.0833	0.0833	111	106	72 - 129	5	15	
Chrysene	0.0756	0.0776	0.0833	0.0833	91	93	66 - 123	3	15	
Benzo[b]fluoranthene	0.0848	0.0772	0.0833	0.0833	102	93	68 - 128	9	15	
Benzo(j,k)fluoranthene	0.0794	0.0839	0.0833	0.0833	95	101	63 - 128	6	16	
Benzo[a]pyrene	0.0830	0.0785	0.0833	0.0833	100	94	66 - 130	6	15	
Indeno(1,2,3-c,d)pyrene	0.0799	0.0799	0.0833	0.0833	96	96	63 - 135	0	15	
Dibenz[a,h]anthracene	0.0804	0.0791	0.0833	0.0833	97	95	65 - 130	2	15	
Benzo[g,h,i]perylene	0.0817	0.0807	0.0833	0.0833	98	97	66 - 127	1	15	
Surrogate:										
2-Fluorobiphenyl					81	75	46 - 113			
Pyrene-d10					93	90	45 - 114			
Terphenyl-d14					88	89	49 - 121			



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: CAA-NW-WC						
Laboratory ID:	05-232-01					
Aroclor 1016	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	46-125				
Client ID: CAA-NE-WC						
Laboratory ID:	05-232-02					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				
Client ID: CAA-SW-WC						
Laboratory ID:	05-232-03					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	46-125				
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Aroclor 1016	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.052	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		BH-N-SE				
Laboratory ID:		05-232-07				
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	72	46-125				
Client ID:		BH-N-NE				
Laboratory ID:		05-232-08				
Aroclor 1016	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-29-20	6-1-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-29-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	61	46-125				



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 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Aroclor 1016	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	86	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0529S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.455	0.469	0.500	0.500	N/A	91	94	50-134	3	18
Surrogate:										
DCB						90	89	46-125		



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 Laboratory Reference: 2005-232
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: CAA-NW-WC						
Laboratory ID: 05-232-01						
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	230	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.52	EPA 6010D	6-1-20	6-1-20	
Chromium	26	0.52	EPA 6010D	6-1-20	6-1-20	
Copper	30	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.2	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	23	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	69	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID: CAA-NE-WC
 Laboratory ID: 05-232-02

Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	250	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	0.58	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	25	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	27	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	16	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	72	2.6	EPA 6010D	6-1-20	6-1-20	



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 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SW-WC					
Laboratory ID:	05-232-03					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	260	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	27	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	25	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	23	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	64	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	210	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	20	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	31	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	16	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	52	2.6	EPA 6010D	6-1-20	6-1-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Arsenic	22	10	EPA 6010D	6-1-20	6-1-20	
Barium	47	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.52	EPA 6010D	6-1-20	6-1-20	
Chromium	43	0.52	EPA 6010D	6-1-20	6-1-20	
Copper	24	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	14	5.2	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	15	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	63	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Arsenic	21	10	EPA 6010D	6-1-20	6-1-20	
Barium	48	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	71	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	33	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	59	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	26	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	130	2.6	EPA 6010D	6-1-20	6-1-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Arsenic	16	10	EPA 6010D	6-1-20	6-1-20	
Barium	62	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	1.2	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	55	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	29	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	130	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	22	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	220	2.6	EPA 6010D	6-1-20	6-1-20	

Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Arsenic	22	10	EPA 6010D	6-1-20	6-1-20	
Barium	67	2.6	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.51	EPA 6010D	6-1-20	6-1-20	
Chromium	39	0.51	EPA 6010D	6-1-20	6-1-20	
Copper	26	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	33	5.1	EPA 6010D	6-1-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	21	2.6	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	110	2.6	EPA 6010D	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601SH1					
Arsenic	ND	10	EPA 6010D	6-1-20	6-1-20	
Barium	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Chromium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Copper	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.0	EPA 6010D	6-1-20	6-1-20	
Nickel	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Laboratory ID:	MB0601S1					
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

					Source	Percent	Recovery	RPD		
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-232-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	L
Barium	224	237	NA	NA		NA	NA	5	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	25.1	28.5	NA	NA		NA	NA	13	20	
Copper	29.6	29.0	NA	NA		NA	NA	2	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Nickel	22.0	27.2	NA	NA		NA	NA	21	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Zinc	67.1	70.9	NA	NA		NA	NA	5	20	

Laboratory ID: 05-208-01

Mercury	ND	ND	NA	NA		NA	NA	NA	20	
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MATRIX SPIKES

Laboratory ID: 05-232-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	90.6	89.5	100	100	ND	91	90	75-125	1	20
Barium	343	345	100	100	224	119	120	75-125	0	20
Cadmium	44.8	45.0	50.0	50.0	ND	90	90	75-125	0	20
Chromium	99.8	102	100	100	25.1	75	77	75-125	2	20
Copper	77.4	78.1	50.0	50.0	29.6	96	97	75-125	1	20
Lead	205	208	250	250	ND	82	83	75-125	1	20
Nickel	99.9	105	100	100	22.0	78	83	75-125	5	20
Selenium	75.3	87.5	100	100	ND	75	88	75-125	15	20
Silver	20.0	19.9	25.0	25.0	ND	80	79	75-125	1	20
Zinc	157	158	100	100	67.1	90	91	75-125	1	20

Laboratory ID: 05-208-01

Mercury	0.454	0.498	0.500	0.500	0.00500	90	99	80-120	9	20
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		CAA-NW-WC				
Laboratory ID:		05-232-01				
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.77	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.12	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:		CAA-NE-WC				
Laboratory ID:		05-232-02				
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.76	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.094	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:		CAA-SW-WC				
Laboratory ID:		05-232-03				
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.79	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.11	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CAA-SE-WC					
Laboratory ID:	05-232-04					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.79	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.087	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.21	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.86	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.16	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.22	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.49	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.20	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.12	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602TM1					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID:	MB0602T11					
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Laboratory ID:	MB0602TM2					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID:	MB0602T2					
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-208-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	ND	ND	NA	NA		NA	NA	NA	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.684	0.654	NA	NA		NA	NA	4	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-208-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.376	0.380	NA	NA		NA	NA	1	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	



Date of Report: June 2, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	05-208-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.79	3.78	4.00	4.00	ND	95	95	75-125	0	20
Barium	3.69	3.67	4.00	4.00	ND	92	92	75-125	1	20
Cadmium	1.96	1.95	2.00	2.00	ND	98	98	75-125	1	20
Chromium	4.21	4.21	4.00	4.00	0.684	88	88	75-125	0	20
Lead	8.54	8.50	10.0	10.0	ND	85	85	75-125	0	20
Selenium	3.88	3.91	4.00	4.00	ND	97	98	75-125	1	20
Silver	0.904	0.908	1.00	1.00	ND	90	91	75-125	0	20
Laboratory ID:	05-208-01									
Mercury	0.0490	0.0497	0.0500	0.0500	ND	98	99	75-125	1	20
Laboratory ID:	05-138-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.91	3.91	4.00	4.00	ND	98	98	75-125	0	20
Barium	3.95	3.96	4.00	4.00	0.376	89	90	75-125	0	20
Cadmium	1.94	1.97	2.00	2.00	ND	97	98	75-125	1	20
Chromium	3.36	3.39	4.00	4.00	ND	84	85	75-125	1	20
Lead	8.35	8.35	10.0	10.0	ND	84	84	75-125	0	20
Selenium	3.91	3.83	4.00	4.00	ND	98	96	75-125	2	20
Silver	0.894	0.896	1.00	1.00	ND	89	90	75-125	0	20
Laboratory ID:	05-138-01									
Mercury	0.0472	0.0483	0.0500	0.0500	ND	94	97	75-125	2	20



Date of Report: June 2, 2020
Samples Submitted: May 29, 2020
Laboratory Reference: 2005-232
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
CAA-NW-WC	05-232-01	3	5-29-20
CAA-NE-WC	05-232-02	3	5-29-20
CAA-SW-WC	05-232-03	3	5-29-20
CAA-SE-WC	05-232-04	3	5-29-20
BH-N-SW	05-232-05	4	5-29-20
BH-N-NW	05-232-06	3	5-29-20
BH-N-SE	05-232-07	2	5-29-20
BH-N-NE	05-232-08	2	5-29-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental

Project Number:

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Moxley, B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: 05-232

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH	NWTPH	NWTPH	NWTPH	Volatiles	Halogenes	EDB Et	Semivols (with lo	PAHs 8	PCBs	Organic	Organic	Chlorine	Total R	Total M	TCLP M	HEM (c						% Moist
1	CAA-NW-WC	5/29/2020	1050	Solid	5			X	X	X					X				X	X								X
2	CAA-NE-WC	↓	1110	↓	↓			↓	↓	↓					↓				↓	↓							↓	
3	CAA-SW-WC		1125																									
4	CAA-SE-WC		1145												X													
5	BH-N-SW		1230																									
6	BH-N-NW		1245																									
7	BH-N-SE		1300		↓	↓			↓	↓	↓					X				↓	↓							↓
8	BH-N-NE		1315						↓	↓	↓									↓	↓							↓

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>DH Environmental</u>	<u>5/29/2020</u>	<u>1430</u>	<u>Date to Dave Hill & data@dhenviro.com</u>
<u>[Signature]</u>	<u>OSE</u>	<u>5/29/20</u>	<u>1430</u>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☒ Level III ☐ Level IV ☐		
		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 9, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-050

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 3, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 9, 2020
Samples Submitted: June 3, 2020
Laboratory Reference: 2006-050
Project: Star Forge

Case Narrative

Samples were collected on June 3, 2020 and received by the laboratory on June 3, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for samples BH-S-SE, BH-S-SW, BH-S-M-E, BH-S-M-W, BH-S-NE, and BH-S-NW due to sample matrix effects.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Gasoline	ND	5.4	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	84	58-129				
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Gasoline	ND	5.6	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	85	58-129				
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Gasoline	ND	4.9	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	58-129				
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Gasoline	ND	5.8	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Gasoline	ND	5.3	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Gasoline	ND	5.2	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	58-129				
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Gasoline	ND	5.3	NWTPH-Gx	6-3-20	6-3-20	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	87	58-129				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Gasoline	ND	5.2	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Gasoline	ND	5.9	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Gasoline	ND	6.0	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	58-129				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S1					
Gasoline	ND	5.0	NWTPH-Gx	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	58-129				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-050-01									
	ORIG	DUP								
Gasoline	ND	ND	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						84	86	58-129		



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	20000	2500	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Diesel Range Organics	ND	1400	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	15000	2700	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	20000	2600	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Diesel Range Organics	ND	1300	NWTPH-Dx	6-4-20	6-5-20	
Lube Oil	16000	2700	NWTPH-Dx	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil	220	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	71	50-150				

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	51	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				

Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Diesel Range Organics	ND	26	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Diesel Range Organics	ND	26	NWTPH-Dx	6-8-20	6-8-20	
Lube Oil Range Organics	ND	52	NWTPH-Dx	6-8-20	6-8-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
Diesel Range Organics	ND	25	NWTPH-Dx	6-4-20	6-4-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-4-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				
Laboratory ID:	MB0608S3					
Diesel Range Organics	ND	25	NWTPH-Dx	6-8-20	6-8-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-8-20	6-8-20	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	96	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	SB0604S1							
	ORIG	DUP						
Diesel Fuel #2	91.6	82.3	NA	NA	NA	11	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				104	94	50-150		
Laboratory ID:	SB0608S3							
	ORIG	DUP						
Diesel Fuel #2	82.8	81.7	NA	NA	NA	1	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				96	98	50-150		



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0079	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Acetone	0.057	0.012	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0075	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0074	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Butanone	0.013	0.0076	EPA 8260D	6-4-20	6-4-20	Y
Bromochloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	0.0018	0.0012	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Benzene	0.0014	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	0.0025	0.0024	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0059	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.054	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.27	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.27	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.054	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	120	74-131				
Toluene-d8	82	78-128				
4-Bromofluorobenzene	74	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.010	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Acetone	0.33	0.015	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	0.0062	0.0015	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0097	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0095	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Butanone	0.081	0.0098	EPA 8260D	6-3-20	6-4-20	Y
Bromochloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	0.015	0.0076	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0030	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0015	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.056	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.28	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.28	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.28	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.056	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	74-131				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	79	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0079	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Acetone	0.11	0.012	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	0.0051	0.0012	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0075	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Butanone	0.028	0.0077	EPA 8260D	6-3-20	6-4-20	Y
Bromochloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0024	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0059	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.049	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.25	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.25	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.049	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	101	74-131				
Toluene-d8	89	78-128				
4-Bromofluorobenzene	73	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0092	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Acetone	0.14	0.014	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	0.0046	0.0014	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0088	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0087	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Butanone	0.037	0.0089	EPA 8260D	6-4-20	6-4-20	Y
Bromochloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Benzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	ND	0.0027	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0069	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0014	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.058	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.29	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.29	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.058	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	85	74-131				
Toluene-d8	88	78-128				
4-Bromofluorobenzene	73	71-130				



Date of Report: June 9, 2020
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 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.025	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0067	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0069	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0021	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0053	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	41	74-131				Q
Toluene-d8	103	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0074	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.029	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0055	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	37	74-131				Q
Toluene-d8	106	78-128				
4-Bromofluorobenzene	99	71-130				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0074	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.017	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0056	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	44	74-131				Q
Toluene-d8	112	78-128				
4-Bromofluorobenzene	109	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Acetone	ND	0.010	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0065	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0064	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0066	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0051	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	34	74-131				Q
Toluene-d8	102	78-128				
4-Bromofluorobenzene	97	71-130				



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.020	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0069	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0068	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0070	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0054	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	33	74-131				Q
Toluene-d8	106	78-128				
4-Bromofluorobenzene	103	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloromethane	ND	0.0076	EPA 8260D	6-3-20	6-4-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroethane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Acetone	0.016	0.011	EPA 8260D	6-3-20	6-4-20	
Iodomethane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methylene Chloride	ND	0.0072	EPA 8260D	6-3-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Vinyl Acetate	ND	0.0071	EPA 8260D	6-3-20	6-4-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Butanone	ND	0.0073	EPA 8260D	6-3-20	6-4-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chloroform	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Benzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Toluene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Hexanone	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
m,p-Xylene	ND	0.0023	EPA 8260D	6-3-20	6-4-20	
o-Xylene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Styrene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromoform	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Hexachlorobutadiene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
Naphthalene	ND	0.0057	EPA 8260D	6-3-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-3-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	14	74-131				Q
Toluene-d8	102	78-128				
4-Bromofluorobenzene	97	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloromethane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromomethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloroethane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Acetone	ND	0.013	EPA 8260D	6-3-20	6-3-20	
Iodomethane	ND	0.0080	EPA 8260D	6-3-20	6-3-20	
Carbon Disulfide	ND	0.0019	EPA 8260D	6-3-20	6-3-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Vinyl Acetate	ND	0.0074	EPA 8260D	6-3-20	6-3-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Butanone	ND	0.0067	EPA 8260D	6-3-20	6-3-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chloroform	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Benzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichloroethane	ND	0.0020	EPA 8260D	6-3-20	6-3-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Toluene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-3-20	6-3-20	
o-Xylene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Styrene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromoform	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
Naphthalene	ND	0.0050	EPA 8260D	6-3-20	6-3-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-3-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



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Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloromethane	ND	0.0067	EPA 8260D	6-4-20	6-4-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromomethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloroethane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Acetone	ND	0.010	EPA 8260D	6-4-20	6-4-20	
Iodomethane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methylene Chloride	ND	0.0064	EPA 8260D	6-4-20	6-4-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Vinyl Acetate	ND	0.0063	EPA 8260D	6-4-20	6-4-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Butanone	ND	0.0065	EPA 8260D	6-4-20	6-4-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chloroform	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Benzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Toluene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-4-20	6-4-20	
o-Xylene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Styrene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromoform	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
Naphthalene	ND	0.0050	EPA 8260D	6-4-20	6-4-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0603S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0457	0.0499	0.0500	0.0500	91	100	55-126	9	17	
Benzene	0.0427	0.0448	0.0500	0.0500	85	90	65-121	5	16	
Trichloroethene	0.0494	0.0513	0.0500	0.0500	99	103	74-126	4	16	
Toluene	0.0456	0.0487	0.0500	0.0500	91	97	71-121	7	16	
Chlorobenzene	0.0532	0.0537	0.0500	0.0500	106	107	72-123	1	15	
Surrogate:										
Dibromofluoromethane					96	95	74-131			
Toluene-d8					102	100	78-128			
4-Bromofluorobenzene					97	86	71-130			
Laboratory ID:	SB0604S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0428	0.0445	0.0500	0.0500	86	89	55-126	4	17	
Benzene	0.0400	0.0420	0.0500	0.0500	80	84	65-121	5	16	
Trichloroethene	0.0461	0.0511	0.0500	0.0500	92	102	74-126	10	16	
Toluene	0.0435	0.0471	0.0500	0.0500	87	94	71-121	8	16	
Chlorobenzene	0.0473	0.0501	0.0500	0.0500	95	100	72-123	6	15	
Surrogate:										
Dibromofluoromethane					97	96	74-131			
Toluene-d8					106	108	78-128			
4-Bromofluorobenzene					99	96	71-130			



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Naphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
2-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
1-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Acenaphthylene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Acenaphthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Fluorene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Phenanthrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[a]anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Chrysene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[b]fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo(j,k)fluoranthene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[a]pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Dibenz[a,h]anthracene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
Benzo[g,h,i]perylene	ND	0.0068	EPA 8270E/SIM	6-5-20	6-6-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	75	46 - 113				
Pyrene-d10	90	45 - 114				
Terphenyl-d14	87	49 - 121				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0605S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	6-5-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	46 - 113				
Pyrene-d10	86	45 - 114				
Terphenyl-d14	85	49 - 121				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0605S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0765	0.0724	0.0833	0.0833	92	87	60 - 116	6	16	
Acenaphthylene	0.0880	0.0847	0.0833	0.0833	106	102	60 - 125	4	15	
Acenaphthene	0.0839	0.0813	0.0833	0.0833	101	98	60 - 121	3	15	
Fluorene	0.0932	0.0831	0.0833	0.0833	112	100	65 - 126	11	15	
Phenanthrene	0.0907	0.0778	0.0833	0.0833	109	93	65 - 120	15	15	
Anthracene	0.0949	0.0871	0.0833	0.0833	114	105	67 - 125	9	15	
Fluoranthene	0.0939	0.0890	0.0833	0.0833	113	107	66 - 125	5	15	
Pyrene	0.0927	0.0870	0.0833	0.0833	111	104	62 - 125	6	15	
Benzo[a]anthracene	0.0939	0.0873	0.0833	0.0833	113	105	72 - 129	7	15	
Chrysene	0.0939	0.0860	0.0833	0.0833	113	103	66 - 123	9	15	
Benzo[b]fluoranthene	0.0874	0.0825	0.0833	0.0833	105	99	68 - 128	6	15	
Benzo(j,k)fluoranthene	0.0985	0.0907	0.0833	0.0833	118	109	63 - 128	8	16	
Benzo[a]pyrene	0.0981	0.0879	0.0833	0.0833	118	106	66 - 130	11	15	
Indeno(1,2,3-c,d)pyrene	0.0903	0.0856	0.0833	0.0833	108	103	63 - 135	5	15	
Dibenz[a,h]anthracene	0.0842	0.0806	0.0833	0.0833	101	97	65 - 130	4	15	
Benzo[g,h,i]perylene	0.0923	0.0854	0.0833	0.0833	111	103	66 - 127	8	15	
Surrogate:										
2-Fluorobiphenyl					85	87	46 - 113			
Pyrene-d10					106	97	45 - 114			
Terphenyl-d14					101	92	49 - 121			



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: TS-SW-WC						
Laboratory ID:	06-050-01					
Aroclor 1016	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	22	5.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	18	5.1	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S
Client ID: TS-NW-WC						
Laboratory ID:	06-050-02					
Aroclor 1016	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	8.5	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	6.6	1.1	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S
Client ID: TS-NE-WC						
Laboratory ID:	06-050-03					
Aroclor 1016	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	8.1	1.0	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	7.4	1.0	EPA 8082A	6-4-20	6-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	46-125				S



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Aroclor 1016	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1221	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1232	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1242	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1248	ND	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1254	12	1.1	EPA 8082A	6-4-20	6-5-20	
Aroclor 1260	9.2	1.1	EPA 8082A	6-4-20	6-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	46-125				S
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	100	46-125				
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Aroclor 1016	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	99	46-125				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	88	46-125				
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	94	46-125				
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Aroclor 1016	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	103	46-125				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Aroclor 1016	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-4-20	6-4-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>89</i>	<i>46-125</i>				



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S2					
Aroclor 1016	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-4-20	6-4-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	103	46-125				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	06-050-05										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.466	0.496	0.500	0.500	ND	93	99	43-125	6	15	
Surrogate:											
DCB						95	97	46-125			



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	58	2.5	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	30	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	34	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	7.5	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.25	EPA 7471B	6-8-20	6-8-20	
Nickel	31	2.5	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	38	2.5	EPA 6010D	6-4-20	6-4-20	

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Arsenic	12	11	EPA 6010D	6-4-20	6-4-20	
Barium	74	2.7	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.54	EPA 6010D	6-4-20	6-4-20	
Chromium	66	0.54	EPA 6010D	6-4-20	6-4-20	
Copper	32	1.1	EPA 6010D	6-4-20	6-4-20	
Lead	8.5	5.4	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.27	EPA 7471B	6-8-20	6-8-20	
Nickel	36	2.7	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	11	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.1	EPA 6010D	6-4-20	6-4-20	
Zinc	85	2.7	EPA 6010D	6-4-20	6-4-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	76	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	42	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	32	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	10	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	31	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	51	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Arsenic	24	11	EPA 6010D	6-4-20	6-4-20	
Barium	86	2.7	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.53	EPA 6010D	6-4-20	6-4-20	
Chromium	200	0.53	EPA 6010D	6-4-20	6-4-20	
Copper	44	1.1	EPA 6010D	6-4-20	6-4-20	
Lead	26	5.3	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.27	EPA 7471B	6-8-20	6-8-20	
Nickel	53	2.7	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	11	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.1	EPA 6010D	6-4-20	6-4-20	
Zinc	63	2.7	EPA 6010D	6-4-20	6-4-20	



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TOTAL METALS
EPA 6010D/7471B

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Arsenic	17	10	EPA 6010D	6-4-20	6-4-20	
Barium	54	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	23	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	20	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	9.8	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	16	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	57	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Arsenic	15	10	EPA 6010D	6-4-20	6-4-20	
Barium	47	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	21	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	19	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	15	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	64	2.6	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Arsenic	18	10	EPA 6010D	6-4-20	6-4-20	
Barium	64	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	27	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	24	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	19	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	62	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Arsenic	17	10	EPA 6010D	6-4-20	6-4-20	
Barium	47	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	21	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	19	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	12	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	14	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	55	2.6	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Arsenic	19	10	EPA 6010D	6-4-20	6-4-20	
Barium	48	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	0.72	0.51	EPA 6010D	6-4-20	6-4-20	
Chromium	150	0.51	EPA 6010D	6-4-20	6-4-20	
Copper	40	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	86	5.1	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	49	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	200	2.6	EPA 6010D	6-4-20	6-4-20	

Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Arsenic	18	10	EPA 6010D	6-4-20	6-4-20	
Barium	46	2.6	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.52	EPA 6010D	6-4-20	6-4-20	
Chromium	36	0.52	EPA 6010D	6-4-20	6-4-20	
Copper	23	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	23	5.2	EPA 6010D	6-4-20	6-4-20	
Mercury	ND	0.26	EPA 7471B	6-8-20	6-8-20	
Nickel	19	2.6	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	79	2.6	EPA 6010D	6-4-20	6-4-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604SH1					
Arsenic	ND	10	EPA 6010D	6-4-20	6-4-20	
Barium	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Cadmium	ND	0.50	EPA 6010D	6-4-20	6-4-20	
Chromium	ND	0.50	EPA 6010D	6-4-20	6-4-20	
Copper	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Lead	ND	5.0	EPA 6010D	6-4-20	6-4-20	
Nickel	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Selenium	ND	10	EPA 6010D	6-4-20	6-4-20	
Silver	ND	1.0	EPA 6010D	6-4-20	6-4-20	
Zinc	ND	2.5	EPA 6010D	6-4-20	6-4-20	
Laboratory ID:	MB0608S1					
Mercury	ND	0.25	EPA 7471B	6-8-20	6-8-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

					Source	Percent	Recovery	RPD		
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-229-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	C
Barium	51.6	50.2	NA	NA		NA	NA	3	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	19.2	18.0	NA	NA		NA	NA	7	20	
Copper	21.5	21.6	NA	NA		NA	NA	0	20	
Lead	5.15	6.45	NA	NA		NA	NA	22	20	
Nickel	26.5	23.3	NA	NA		NA	NA	13	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Zinc	45.2	42.4	NA	NA		NA	NA	6	20	

Laboratory ID: 06-073-01

Mercury	ND	ND	NA	NA		NA	NA	NA	20	
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MATRIX SPIKES

Laboratory ID: 05-229-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	88.6	89.0	100	100	ND	89	89	75-125	1	20
Barium	138	141	100	100	51.6	86	89	75-125	2	20
Cadmium	41.6	41.8	50.0	50.0	ND	83	84	75-125	0	20
Chromium	104	108	100	100	19.2	85	89	75-125	4	20
Copper	69.5	66.6	50.0	50.0	21.5	96	90	75-125	4	20
Lead	214	224	250	250	5.15	84	88	75-125	4	20
Nickel	108	108	100	100	26.5	81	82	75-125	0	20
Selenium	86.0	86.2	100	100	ND	86	86	75-125	0	20
Silver	22.5	22.9	25.0	25.0	ND	90	91	75-125	2	20
Zinc	126	123	100	100	45.2	81	78	75-125	2	20

Laboratory ID: 06-073-01

Mercury	0.551	0.570	0.500	0.500	0.0597	98	102	80-120	3	20
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SW-WC					
Laboratory ID:	06-050-01					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.65	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.054	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	TS-NW-WC					
Laboratory ID:	06-050-02					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.29	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	TS-NE-WC					
Laboratory ID:	06-050-03					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.63	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.054	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TS-SE-WC					
Laboratory ID:	06-050-04					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.57	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.12	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.078	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.077	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.22	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.10	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.11	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	

Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.26	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.10	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	0.25	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	0.14	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

**TCLP METALS
 EPA 1311/6010D/7470A
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID: MB0605TM1						
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	
Laboratory ID: MB0605T1						
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	
Laboratory ID: MB0605TM2						
Arsenic	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Barium	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Cadmium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Chromium	ND	0.020	EPA 6010D	6-5-20	6-5-20	
Lead	ND	0.20	EPA 6010D	6-5-20	6-5-20	
Selenium	ND	0.40	EPA 6010D	6-5-20	6-5-20	
Silver	ND	0.040	EPA 6010D	6-5-20	6-5-20	
Laboratory ID: MB0605T2						
Mercury	ND	0.0050	EPA 7470A	6-5-20	6-5-20	



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	06-050-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.654	0.652	NA	NA		NA	NA	0	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.0542	0.0556	NA	NA		NA	NA	3	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-050-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	06-050-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.99	3.98	4.00	4.00	ND	100	100	75-125	0	20
Barium	4.18	4.23	4.00	4.00	0.654	88	89	75-125	1	20
Cadmium	1.90	1.91	2.00	2.00	ND	95	95	75-125	1	20
Chromium	3.73	3.75	4.00	4.00	0.0542	92	92	75-125	1	20
Lead	8.92	8.93	10.0	10.0	ND	89	89	75-125	0	20
Selenium	3.97	3.94	4.00	4.00	ND	99	98	75-125	1	20
Silver	0.906	0.906	1.00	1.00	ND	91	91	75-125	0	20
Laboratory ID:	06-050-01									
Mercury	0.0479	0.0478	0.0500	0.0500	ND	96	96	75-125	0	20



Date of Report: June 9, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050
 Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
TS-SW-WC	06-050-01	1	6-3-20
TS-NW-WC	06-050-02	8	6-3-20
TS-NE-WC	06-050-03	3	6-3-20
TS-SE-WC	06-050-04	6	6-3-20
BH-S-SE	06-050-05	2	6-3-20
BH-S-SW	06-050-06	3	6-3-20
BH-S-M-E	06-050-07	2	6-3-20
BH-S-M-W	06-050-08	2	6-3-20
BH-S-NE	06-050-09	3	6-3-20
BH-S-NW	06-050-10	4	6-3-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: **OH Environmental**

Project Number:

Project Name: **Star Forge**

Project Manager: **Dave Hill**

Sampled by: **Brian Johnson**

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: 06-050									
Number of Containers									
NWTPH-HCID									
NWTPH-Gx/BTEX									
NWTPH-Gx									
NWTPH-Dx (☐ Acid / SG Clean-up)									
Volatiles 8260C									
Halogenated Volatiles 8260C									
EDB EPA 8011 (Waters Only)									
Semivolatiles 8270D/SIM (with low-level PAHs)									
PAHs 8270D/SIM (low-level)									
PCBs 8082A									
Organochlorine Pesticides 8081B									
Organophosphorus Pesticides 8270D/SIM									
Chlorinated Acid Herbicides 8151A									
Total RCRA Metals + Cu, Ni, Zn									
Total MTCA Metals									
TCLP Metals (RCRA 8)									
HEM (oil and grease) 1664A									

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	OH Env.	6-3-20	1600	
<i>[Signature]</i>	OSE	6/3/20	1600	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☐ Level III ☐ Level IV ☐		
		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 19, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-184

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 17, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 19, 2020
Samples Submitted: June 17, 2020
Laboratory Reference: 2006-184
Project: Star Forge

Case Narrative

Samples were collected on June 17, 2020 and received by the laboratory on June 17, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits due to sample matrix effects.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Barium, Chromium, Copper And Zinc are outside control limits due to sample inhomogeneity.

The Matrix Spike/ Matrix Spike Duplicate recoveries for Cadmium, Lead and Nickel are outside control limits due to matrix effects. The Spike Blank recovery was 90% for Cadmium, 96% for Lead and 98% for Nickel

The Matrix Spike/ Matrix Spike Duplicate recoveries for Zinc are outside control limits due to matrix inhomogeneity.. The Spike Blank recovery was 104%.

The Matrix Spike/Matrix Spike Duplicate RPD for Zinc is outside control limits due to matrix inhomogeneity.

The practical quantitation limit for Silver is elevated due to interferences present in the sample BH-SE-Trench-WC - 02, (06-184-02).

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
Dichlorodifluoromethane	ND	0.0017	EPA 8260D	6-17-20	6-17-20	
Chloromethane	ND	0.0072	EPA 8260D	6-17-20	6-17-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Bromomethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Chloroethane	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Acetone	0.023	0.011	EPA 8260D	6-17-20	6-17-20	
Iodomethane	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Methylene Chloride	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Vinyl Acetate	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
2-Butanone	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Chloroform	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Benzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Toluene	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
2-Hexanone	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
m,p-Xylene	ND	0.0022	EPA 8260D	6-17-20	6-17-20	
o-Xylene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Styrene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Bromoform	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Bromobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
n-Propylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
2-Chlorotoluene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
4-Chlorotoluene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
tert-Butylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
sec-Butylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
p-Isopropyltoluene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
n-Butylbenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
Hexachlorobutadiene	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
Naphthalene	ND	0.0056	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	6-17-20	6-17-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	23	74-131				
<i>Toluene-d8</i>	103	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				

Q



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-SE-Trench-WC-02						
Laboratory ID: 06-184-02						
Dichlorodifluoromethane	ND	0.0019	EPA 8260D	6-17-20	6-17-20	
Chloromethane	ND	0.0081	EPA 8260D	6-17-20	6-17-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Bromomethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Chloroethane	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Acetone	0.013	0.012	EPA 8260D	6-17-20	6-17-20	
Iodomethane	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Methylene Chloride	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Vinyl Acetate	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
2-Butanone	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Bromochloromethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Chloroform	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Benzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Toluene	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-SE-Trench-WC-02						
Laboratory ID: 06-184-02						
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
2-Hexanone	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
m,p-Xylene	ND	0.0025	EPA 8260D	6-17-20	6-17-20	
o-Xylene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Styrene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Bromoform	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Bromobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
n-Propylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
2-Chlorotoluene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
4-Chlorotoluene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
tert-Butylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260D	6-17-20	6-17-20	
sec-Butylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
p-Isopropyltoluene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
n-Butylbenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
Hexachlorobutadiene	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
Naphthalene	ND	0.0062	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	6-17-20	6-17-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	26	74-131				
<i>Toluene-d8</i>	106	78-128				
<i>4-Bromofluorobenzene</i>	99	71-130				

Q



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-SE-Trench-WC-03						
Laboratory ID: 06-184-03						
Dichlorodifluoromethane	ND	0.0020	EPA 8260D	6-17-20	6-17-20	
Chloromethane	ND	0.0088	EPA 8260D	6-17-20	6-17-20	
Vinyl Chloride	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Bromomethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Chloroethane	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Trichlorofluoromethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Acetone	ND	0.014	EPA 8260D	6-17-20	6-17-20	
Iodomethane	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Carbon Disulfide	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Methylene Chloride	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Vinyl Acetate	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
2,2-Dichloropropane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
2-Butanone	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Bromochloromethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Chloroform	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Carbon Tetrachloride	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloropropene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Benzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Trichloroethene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloropropane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Dibromomethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Bromodichloromethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
2-Chloroethyl Vinyl Ether	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Methyl Isobutyl Ketone	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Toluene	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-SE-Trench-WC-03						
Laboratory ID: 06-184-03						
1,1,2-Trichloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Tetrachloroethene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,3-Dichloropropane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
2-Hexanone	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Dibromochloromethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromoethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Chlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Ethylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
m,p-Xylene	ND	0.0027	EPA 8260D	6-17-20	6-17-20	
o-Xylene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Styrene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Bromoform	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Isopropylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Bromobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
n-Propylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
2-Chlorotoluene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
4-Chlorotoluene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
tert-Butylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trimethylbenzene	ND	0.0018	EPA 8260D	6-17-20	6-17-20	
sec-Butylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
p-Isopropyltoluene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
n-Butylbenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromo-3-chloropropane	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
Hexachlorobutadiene	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
Naphthalene	ND	0.0068	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260D	6-17-20	6-17-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	21	74-131				Q
Toluene-d8	108	78-128				
4-Bromofluorobenzene	97	71-130				



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-17-20	6-17-20	
Chloromethane	ND	0.0065	EPA 8260D	6-17-20	6-17-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Bromomethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Chloroethane	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Acetone	ND	0.010	EPA 8260D	6-17-20	6-17-20	
Iodomethane	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
2-Butanone	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Chloroform	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Benzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Toluene	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-17-20	6-17-20	
o-Xylene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Styrene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Bromoform	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260D	6-17-20	6-17-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
Naphthalene	ND	0.0050	EPA 8260D	6-17-20	6-17-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-17-20	6-17-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-130</i>				



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Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0617S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0442	0.0512	0.0500	0.0500	88	102	55-126	15	17	
Benzene	0.0434	0.0478	0.0500	0.0500	87	96	65-121	10	16	
Trichloroethene	0.0498	0.0565	0.0500	0.0500	100	113	74-126	13	16	
Toluene	0.0460	0.0515	0.0500	0.0500	92	103	71-121	11	16	
Chlorobenzene	0.0466	0.0525	0.0500	0.0500	93	105	72-123	12	15	
Surrogate:										
Dibromofluoromethane					100	100	74-131			
Toluene-d8					109	109	78-128			
4-Bromofluorobenzene					100	96	71-130			



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
Aroclor 1016	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-17-20	6-17-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 117 46-125</i>						

Client ID: BH-SE-Trench-WC-02						
Laboratory ID: 06-184-02						
Aroclor 1016	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-17-20	6-17-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 97 46-125</i>						

Client ID: BH-SE-Trench-WC-03						
Laboratory ID: 06-184-03						
Aroclor 1016	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-17-20	6-17-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-17-20	6-17-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 111 46-125</i>						



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Aroclor 1016	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-17-20	6-17-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	115	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0617S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.476	0.479	0.500	0.500	N/A	95	96	50-134	1	18	
Surrogate:											
DCB						114	107	46-125			



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
Arsenic	ND	10	EPA 6010D	6-18-20	6-18-20	
Barium	34	5.1	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Chromium	16	1.0	EPA 6010D	6-18-20	6-18-20	
Copper	18	2.0	EPA 6010D	6-18-20	6-18-20	
Lead	13	10	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.26	EPA 7471B	6-18-20	6-18-20	
Nickel	11	5.1	EPA 6010D	6-18-20	6-18-20	
Selenium	ND	10	EPA 6010D	6-18-20	6-18-20	
Silver	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Zinc	40	10	EPA 6010D	6-18-20	6-18-20	

Client ID: BH-SE-Trench-WC-02						
Laboratory ID: 06-184-02						
Arsenic	ND	10	EPA 6010D	6-18-20	6-18-20	
Barium	72	5.1	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Chromium	23	1.0	EPA 6010D	6-18-20	6-18-20	
Copper	30	2.1	EPA 6010D	6-18-20	6-18-20	
Lead	12	5.1	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.26	EPA 7471B	6-18-20	6-18-20	
Nickel	9.2	5.1	EPA 6010D	6-18-20	6-18-20	
Selenium	ND	10	EPA 6010D	6-18-20	6-18-20	
Silver	ND	2.1	EPA 6010D	6-18-20	6-18-20	U1
Zinc	64	10	EPA 6010D	6-18-20	6-18-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-SE-Trench-WC-03						
Laboratory ID: 06-184-03						
Arsenic	ND	10	EPA 6010D	6-18-20	6-18-20	
Barium	67	5.1	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Chromium	22	1.0	EPA 6010D	6-18-20	6-18-20	
Copper	28	2.0	EPA 6010D	6-18-20	6-18-20	
Lead	12	10	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.25	EPA 7471B	6-18-20	6-18-20	
Nickel	20	5.1	EPA 6010D	6-18-20	6-18-20	
Selenium	ND	10	EPA 6010D	6-18-20	6-18-20	
Silver	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Zinc	54	10	EPA 6010D	6-18-20	6-18-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0618SH1					
Arsenic	ND	5.0	EPA 6010D	6-18-20	6-18-20	
Barium	ND	2.5	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	0.50	EPA 6010D	6-18-20	6-18-20	
Chromium	ND	0.50	EPA 6010D	6-18-20	6-18-20	
Copper	ND	1.0	EPA 6010D	6-18-20	6-18-20	
Lead	ND	5.0	EPA 6010D	6-18-20	6-18-20	
Nickel	ND	2.5	EPA 6010D	6-18-20	6-18-20	
Selenium	ND	5.0	EPA 6010D	6-18-20	6-18-20	
Silver	ND	0.50	EPA 6010D	6-18-20	6-18-20	
Zinc	ND	2.5	EPA 6010D	6-18-20	6-18-20	
Laboratory ID:	MB0618S1					
Mercury	ND	0.25	EPA 7471B	6-18-20	6-18-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-184-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	33.6	66.2	NA	NA	NA	65	20	L
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	15.7	24.5	NA	NA	NA	44	20	L
Copper	17.7	33.1	NA	NA	NA	61	20	L
Lead	12.3	12.2	NA	NA	NA	1	20	
Nickel	10.3	18.0	NA	NA	NA	54	20	C
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	39.0	66.8	NA	NA	NA	53	20	L

Laboratory ID:	06-184-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	06-184-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	82.1	83.8	100	100	ND	82	84	75-125	2	20
Barium	126	130	100	100	33.6	93	97	75-125	3	20
Cadmium	34.2	36.0	50.0	50.0	ND	68	72	75-125	5	20
Chromium	90.5	93.6	100	100	15.7	75	78	75-125	3	20
Copper	71.8	72.3	50.0	50.0	17.7	108	109	75-125	1	20
Lead	196	204	250	250	12.3	73	77	75-125	4	20
Nickel	83.7	89.0	100	100	10.3	73	79	75-125	6	20
Selenium	81.6	85.0	100	100	ND	82	85	75-125	4	20
Silver	19.9	20.0	25.0	25.0	ND	80	80	75-125	1	20
Zinc	195	157	100	100	39.0	156	118	75-125	22	20

Laboratory ID:	06-184-01									
Mercury	0.498	0.487	0.500	0.500	0.0100	98	95	80-120	2	20



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
Arsenic	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Barium	0.37	0.20	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	0.020	EPA 6010D	6-18-20	6-18-20	
Chromium	0.073	0.020	EPA 6010D	6-18-20	6-18-20	
Lead	ND	0.20	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.0050	EPA 7470A	6-18-20	6-18-20	
Selenium	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Silver	ND	0.040	EPA 6010D	6-18-20	6-18-20	

Client ID: BH-SE-Trench-WC-02

Laboratory ID: 06-184-02

Arsenic	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Barium	0.39	0.20	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	0.020	EPA 6010D	6-18-20	6-18-20	
Chromium	0.072	0.020	EPA 6010D	6-18-20	6-18-20	
Lead	ND	0.20	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.0050	EPA 7470A	6-18-20	6-18-20	
Selenium	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Silver	ND	0.040	EPA 6010D	6-18-20	6-18-20	

Client ID: BH-SE-Trench-WC-03

Laboratory ID: 06-184-03

Arsenic	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Barium	0.34	0.20	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	0.020	EPA 6010D	6-18-20	6-18-20	
Chromium	0.062	0.020	EPA 6010D	6-18-20	6-18-20	
Lead	ND	0.20	EPA 6010D	6-18-20	6-18-20	
Mercury	ND	0.0050	EPA 7470A	6-18-20	6-18-20	
Selenium	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Silver	ND	0.040	EPA 6010D	6-18-20	6-18-20	



Date of Report: June 19, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0618TM1					
Arsenic	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Barium	ND	0.20	EPA 6010D	6-18-20	6-18-20	
Cadmium	ND	0.020	EPA 6010D	6-18-20	6-18-20	
Chromium	ND	0.020	EPA 6010D	6-18-20	6-18-20	
Lead	ND	0.20	EPA 6010D	6-18-20	6-18-20	
Selenium	ND	0.40	EPA 6010D	6-18-20	6-18-20	
Silver	ND	0.040	EPA 6010D	6-18-20	6-18-20	

Laboratory ID:	MB0618T1					
Mercury	ND	0.0050	EPA 7470A	6-18-20	6-18-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-184-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	0.372	0.372	NA	NA	NA	0	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	0.0734	0.0746	NA	NA	NA	2	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	06-184-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	06-186-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.96	3.89	4.00	4.00	ND	99	97	75-125	2	20
Barium	4.01	4.02	4.00	4.00	0.372	91	91	75-125	0	20
Cadmium	1.72	1.72	2.00	2.00	ND	86	86	75-125	0	20
Chromium	3.63	3.62	4.00	4.00	0.0734	89	89	75-125	0	20
Lead	8.63	8.63	10.0	10.0	ND	86	86	75-125	0	20
Selenium	4.36	4.10	4.00	4.00	ND	109	102	75-125	6	20
Silver	0.934	0.944	1.00	1.00	ND	93	94	75-125	1	20

Laboratory ID:	06-186-01									
Mercury	0.0499	0.0480	0.0500	0.0500	ND	100	96	75-125	4	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 19, 2020
Samples Submitted: June 17, 2020
Laboratory Reference: 2006-184
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
BH-NE-Trench-WC-01	06-184-01	2	6-17-20
BH-SE-Trench-WC-02	06-184-02	3	6-17-20
BH-SE-Trench-WC-03	06-184-03	2	6-17-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Page 1 of 1

Sampled by:
Brian Johnson

☒ Best available
(other)

Number of Containers

[illegible][illegible]

Comments/Special Instructions

Reviewed/Date

6	17	20
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1300

Data Package: ☒ Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 29, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-232B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on May 29, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 29, 2020
Samples Submitted: May 29, 2020
Laboratory Reference: 2005-232B
Project: Star Forge

Case Narrative

Samples were collected on May 29, 2020 and received by the laboratory on May 29, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: June 29, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-N-SW					
Laboratory ID:	05-232-05					
Hexavalent Chromium	23	2.1	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-N-NW					
Laboratory ID:	05-232-06					
Hexavalent Chromium	1.6	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-N-SE					
Laboratory ID:	05-232-07					
Hexavalent Chromium	5.2	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-N-NE					
Laboratory ID:	05-232-08					
Hexavalent Chromium	1.4	1.0	EPA 7196A mod.	6-26-20	6-26-20	



Date of Report: June 29, 2020
 Samples Submitted: May 29, 2020
 Laboratory Reference: 2005-232B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0626SM1					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-05							
	ORIG	DUP						
Hexavalent Chromium	22.4	18.9	NA	NA	NA	NA	17	20

MATRIX SPIKES

Laboratory ID:	05-232-05										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	13.0	14.3	5.00	5.00	22.4	-188	-162	75-125	10	20	A

SPIKE BLANK

Laboratory ID:	SB0626SM1										
	SB		SB			SB					
Hexavalent Chromium	4.86		5.00		NA	97		75-125	NA	NA	





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





**MA Onsite
Environmental Inc.**

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Turnaround Request (in working days)			Laboratory Number: 05-232	
(Check One)				
☐ Same Day	☐ 1 Day			
☒ 2 Days	☐ 3 Days			
☐ Standard (7 Days)				
☐ (other) _____				
Company: DH Environmental	Project Number:			
Project Name: Star Forge	Project Manager:			
Sampled by: Dave Hill				
N. Moxley, B. Johnson				
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	CAA-NW-WC	5/29/2020	1050	Soil
2	CAA-NE-WC		1110	
3	CAA-SW-WC		1125	
4	CAA-SE-WC		1145	
5	BH-N-SW		1230	
6	BH-N-NW		1245	
7	BH-N-SE		1300	
8	BH-N-NE		1315	
Number of Containers				
NWTPH-HCID				
NWTPH-Gx/BTEX				
NWTPH-Gx				
NWTPH-Dx (☐ Acid / SG Clean-up)				
Volatiles 8260C				
Halogenated Volatiles 8260C				
EDB EPA 8011 (Waters Only)				
Semivolatiles 8270D/SIM (with low-level PAHs)				
PAHs 8270D/SIM (low-level)				
PCBs 8082A				
Organochlorine Pesticides 8081B				
Organophosphorus Pesticides 8270D/SIM				
Chlorinated Acid Herbicides 8151A				
Total RCRA Metals + Cu, Ni, Zn				
Total MTCA Metals				
TCLP Metals (RCRA 8)				
HEM (oil and grease) 1664A				
Hexachrome				
% Moisture				
Signature		Company		
[Signature]		DH Environmental		
Relinquished		Date		
Received		Time		
Relinquished		Comments/Special Instructions		
Received		Data to Dave Hill & data@dhenviro.com		
Relinquished		Added 6/26/2020. DB (same day)		
Received		Data Package: Standard ☒ Level III ☐ Level IV ☐		
Relinquished		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		
Reviewed/Date		Reviewed/Date		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 29, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-050B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 3, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 29, 2020
Samples Submitted: June 3, 2020
Laboratory Reference: 2006-050B
Project: Star Forge

Case Narrative

Samples were collected on June 3, 2020 and received by the laboratory on June 3, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: June 29, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BH-S-SE					
Laboratory ID:	06-050-05					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-S-SW					
Laboratory ID:	06-050-06					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-S-M-E					
Laboratory ID:	06-050-07					
Hexavalent Chromium	1.1	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-S-M-W					
Laboratory ID:	06-050-08					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-S-NE					
Laboratory ID:	06-050-09					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID:	BH-S-NW					
Laboratory ID:	06-050-10					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	



Date of Report: June 29, 2020
 Samples Submitted: June 3, 2020
 Laboratory Reference: 2006-050B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0626SM1					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-05							
	ORIG	DUP						
Hexavalent Chromium	22.4	18.9	NA	NA	NA	NA	17	20

MATRIX SPIKES

Laboratory ID:	05-232-05										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	13.0	14.3	5.00	5.00	22.4	-188	-162	75-125	10	20	A

SPIKE BLANK

Laboratory ID:	SB0626SM1										
	SB		SB			SB					
Hexavalent Chromium	4.86		5.00		NA	97		75-125	NA	NA	





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.on-site-env.com

Brian Johnson

Sample Identification

Nu

% Moisture

(other)

06-050

Chain of Custody

Page 1 of 1

[illegible]

Comments/Special Instructions

16.33

Added 6/26/2020. DB (same day)

Water Level

OSF

6	3	20
---	---	----

1600

Added 6/26/2020. If (same -)

Reviewed/Date

Reviewed/Date

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 29, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-184B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 17, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 29, 2020
Samples Submitted: June 17, 2020
Laboratory Reference: 2006-184B
Project: Star Forge

Case Narrative

Samples were collected on June 17, 2020 and received by the laboratory on June 17, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: June 29, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: BH-NE-Trench-WC-01						
Laboratory ID: 06-184-01						
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID: BH-SE-Trench-WC-02						
Laboratory ID: 06-184-02						
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	
Client ID: BH-SE-Trench-WC-03						
Laboratory ID: 06-184-03						
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	



Date of Report: June 29, 2020
 Samples Submitted: June 17, 2020
 Laboratory Reference: 2006-184B
 Project: Star Forge

**SOLUBLE HEXAVALENT CHROMIUM
 WATER EXTRACTION
 EPA 7196A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0626SM1					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	6-26-20	6-26-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-05							
	ORIG	DUP						
Hexavalent Chromium	22.4	18.9	NA	NA	NA	NA	17	20

MATRIX SPIKES

Laboratory ID:	05-232-05										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	13.0	14.3	5.00	5.00	22.4	-188	-162	75-125	10	20	A

SPIKE BLANK

Laboratory ID:	SB0626SM1										
	SB		SB			SB					
Hexavalent Chromium	4.86		5.00		NA	97		75-125	NA	NA	





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
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- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
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- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: **OH Environmental**

Project Number:

Project Name:

Star Forge

Project Manager:

Dave Hill

Sampled by:

Brian Johnson

Turnaround Request (in working days)

(Check One)

☐ Same Day ☒ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ Best available
(other)

Lab ID Sample Identification

Date Sampled Time Sampled Matrix

Number of Containers

Laboratory Number:

06-184

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx (☐ Acid / SG Clean-up)	
Volatiles 8260C	X
Halogenated Volatiles 8260C	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	X
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals + Cu, Ni, Zn	X
Total MTCA Metals	
TCLP Metals (RCRA 8)	X
HEM (oil and grease) 1664A	
Fish Bio Hold	
Hex chrome	X
% Moisture	X

1 BH-NE-Trench-WC-01
2 BH-SE-Trench-WC-02
3 BH-SE-Trench-WC-03

6-17-20 1050 Solid
1130
1215

5 5 5

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

OH Environmental

6-17-20

1305

Received

OSE

6/17/20

1300

Relinquished

OSE

6/17/20

1300

Received

OSE

6/17/20

1300

Relinquished

OSE

6/17/20

1300

Received

OSE

6/17/20

1300

Reviewed/Date

Reviewed/Date

Reviewed/Date

Reviewed/Date

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

(X) Added 6/26/2020. DB (same day)



DANGEROUS WASTE DESIGNATION FORM – Pit Slag

A. WASTE STREAM NAME AND GENERATION INFORMATION																																				
Waste Stream Name: Pit Slag																																				
Generation Process: Slag Accumulation in Process from Forging Operations																																				
RCRA ID Number that waste will be managed under:		Total Quantity and/or Estimated Generation rate:																																		
Star Forge LLC, DBA Jorgenson Forge: WAD000602813		Estimated 1,000 lbs of slag (total) remaining in the three pits samples.																																		
Other Descriptions (i.e. Shop, Project, Etc.): "AOD Pit", "AFD Pit", and the "HE Pit".																																				
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																				
Physical State:		pH:																																		
☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer		☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																		
		Flashpoint:																																		
		☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																		
Characteristic	PCB Content	TCLP Metals	Total Metals																																	
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here: NA	☒ Not Detected ☐ [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: All samples passed TCLP for RCRA 8 metals	mg/kg ug/kg mg/L ug/L <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Arsenic:</td><td style="text-align: center;">59</td><td>☐ ND</td></tr> <tr><td>Barium:</td><td style="text-align: center;">100</td><td>☐ ND</td></tr> <tr><td>Cadmium:</td><td style="text-align: center;">2.3</td><td>☐ ND</td></tr> <tr><td>Chromium:</td><td style="text-align: center;">68,000</td><td>☐ ND</td></tr> <tr><td>Lead:</td><td style="text-align: center;">210</td><td>☐ ND</td></tr> <tr><td>Mercury:</td><td></td><td>☒ ND</td></tr> <tr><td>Selenium:</td><td></td><td>☒ ND</td></tr> <tr><td>Silver:</td><td></td><td>☒ ND</td></tr> <tr><td>Copper:</td><td style="text-align: center;">2,100</td><td>☐ ND</td></tr> <tr><td>Nickel:</td><td style="text-align: center;">25,000</td><td>☐ ND</td></tr> <tr><td>Zinc:</td><td style="text-align: center;">710</td><td>☐ ND</td></tr> </table> Comments: Highest Values are Shown	Arsenic:	59	☐ ND	Barium:	100	☐ ND	Cadmium:	2.3	☐ ND	Chromium:	68,000	☐ ND	Lead:	210	☐ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	2,100	☐ ND	Nickel:	25,000	☐ ND	Zinc:	710	☐ ND
Arsenic:	59	☐ ND																																		
Barium:	100	☐ ND																																		
Cadmium:	2.3	☐ ND																																		
Chromium:	68,000	☐ ND																																		
Lead:	210	☐ ND																																		
Mercury:		☒ ND																																		
Selenium:		☒ ND																																		
Silver:		☒ ND																																		
Copper:	2,100	☐ ND																																		
Nickel:	25,000	☐ ND																																		
Zinc:	710	☐ ND																																		
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																				
Constituent		Volume (Range %)																																		
Residual Slag		97-100																																		
Soil/Dust/Concrete		0-3																																		



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☒ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

On 28 May 2020, DH Environmental conducted a sampling effort to thoroughly designate the remaining slag and solids in three different pits including the “AOD Pit”, “AFD Pit”, and the “HE Pit”. These locations are shown in the field report for the attached slag designation package. Although slag from each pit was designated individually, the slag designation package represents all of the visible slag remaining in pits at the site as of the date of this letter. Representative samples were collected from each pit and initially analyzed for volatiles by EPA 8260C, PAHs by EPA 8270D, PCBs by EPA 8082, and Total RCRA 8 Metals + Copper, Nickel, and Zinc as well as TCLP for RCRA 8 metals.

The slag exhibited high total concentrations of chromium, copper, and nickel consistent with previous total metals analysis. However, despite the high total concentrations, all samples “passed” the TCLP for RCRA 8 metals. In addition, the total analysis of volatiles by EPA 8260C and PAHs by EPA 8270D did not indicate the slag should designate as characteristic for any RCRA volatiles or semi volatile compounds.

Analysis has identified low level trace constituents listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non-Specific Sources. For example, acetone was detected in the “AFP Pit” at a concentration of 0.0091 mg/kg as well as benzene at 0.0059 mg/kg. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents:

Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste.¹

After it was determined that no characteristic or listed waste designations should apply to the slag, toxic equivalent concentration calculations were conducted on each sample in accordance with WAC 173-303-100(5). Samples exhibiting the highest equivalent concentration calculated from the total metals analysis from each pit were then sent to Rainier Environmental of Fife, WA for analysis by Ecology Method 80-12, Dangerous Waste Fish Bioassay. The samples submitted for fish the bioassay study represented a worst-case sample from all the samples collected. Subsequently, all of the samples

¹ Management of Remediation Waste Under RCRA, EPA530-F-98-026

submitted for Dangerous Waste Fish Bioassay testing resulted in zero mortality of the fish population exposed to the slag. The slag was then designated as non-dangerous solid waste.

Attachments:

- ☒ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2005-008, 2005-008B and 2005-008C)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste

USDOT Proper Shipping Name:

RCRA Waste Codes:

☐ TSCA Regulated Waste

TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description: Non-hazardous waste, solid

Designation Performed by: Stacy Fox, CHMM

Title: Senior Project Scientist

Date: 06-15-2020

Designation Reviewed by: David Hill, PE, CHMM, CPEA

Title: Principal Engineer

Date: 06-18-2020



David J. Hill

Expires 01 December 2021



FIELD REPORT

File Name:
FR_SF_Pit Slag_05282020

Project:
Star Forge Pit Slag Waste Characterization Sampling

Date:
5/28/2020

Owner:
Star Forge

Time of Arrival:
0900

Report Number:
1

Prepared by:
Nathan Moxley

Location:
8531 East Marginal Way

Time of Departure:
1430

Page:
Page 1 of 2

Purpose of Site Visit:
Waste Designation Sampling

Weather:
Indoors

Travel/Prep. Time:
3 hr

Project/Contract Number:
Work Order 03 – Clean Closure

Upon arrival to the site I assessed personal safety hazards: ☒ Yes or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable
Safety Hazards Were Addressed by : ☒ Performing tool box safety meeting ☒ Donning PPE, and observing safety standards

Site Visit Purpose and Details:

A site visit was conducted to collect samples of metal slag-like material observed in several subsurface process pits. Samples are to support waste designation of the material.

Summary of Field Activities:

Nathan Moxley and Brian Johnson of DH Environmental arrived onsite at approximately 0900. Upon arrival we unloaded confined space equipment, tools, and sampling equipment, and set up near the work areas. A tailgate Health and Safety meeting was conducted, and notifications were made to Seattle Fire Dept. of confined space entry work. Pre-entry air monitoring was conducted and a confined space entry permit was filled out. Then ladders were set up and anchored as needed to safely access process pits.

Three pits were identified with slag-like material in them. The pits and sample locations are identified below. All samples were slag-like material unless identified otherwise.

AOD Pit

1. AOD-WC-1, collected from the sloping base of the AOD pit in the northwest corner.
2. AOD-WC-2, collected from the west wall of the AOD pit, approximately 6-ft above the base, and approximately 5-ft north of the south wall.
3. AOD-WC-3, collected from the south wall of the AOD pit, approximately 3-ft above grade, and 1-ft east of the west wall. This sample was collected beneath a white colored, fibrous, insulation-like material
4. AOD-WC-4, sample from the white, fibrous, insulation-like material over sample AOD-WC-3
5. AOD-WC-ACM-01, split sample of AOD-WC-4, submitted separately to NVL Labs for analysis of asbestos

Arc Furnace Pit

6. AFP-WC-1, collected from the south wall of the Arc Furnace Pit, approximately 2-ft east of the centerline and approximately 2-ft below grade
7. AFP-WC-2, collected from the base of the Arc Furnace Pit, just east of AFP-WC-1
8. AFP-WC-3, collected from the north wall of the Arc Furnace Pit, approximately along the centerline, and approximately 7-ft above the base of the pit

HE-18-Pit (Ingot Mold Pit)

This pit was identified in the field based on its location adjacent to, and between columns HE-17, HE-18, and HE-19. This pit is identified by Shannon and Wilson as the Ingot Mold Pit.

9. HE-18-Pit-WC-1, collected from the base of the pit in the southwest corner.
10. HE-18-Pit-WC-2, collected from multiple areas across the northern wall of the pit

All samples were submitted to OnSite Environmental following chain of custody protocol and submitted for analysis of VOCs, PCBs, total RCRA 8 metals, plus copper, nickel, and zinc, and TCLP RCRA 8 Metals. In addition, two samples were selected at random for analysis of SVOCs. Samples were collected by breaking off loose material using a rock hammer and placing it into a clean 1-gal zip-lock bag. The sample was then crushed inside the bag to the extent possible using a rock hammer, before being placed into sampling jars. Samples 'AOD-WC-2', 'AOD-WC-4', and 'HE-18-Pit-WC-1' could not be easily crushed and were submitted directly to the lab inside the zip-lock bags. The lab was asked to break down and process the samples as needed prior to analysis.

- Photos are included in a separate photo log.
- Sample locations are shown on attached site map.

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Field Representative certifies the report was prepared with the intent to portray a true and accurate representation of the work performed or the observations made.

FIELD REPRESENTATIVE:
Nathan Moxley, LG, LHG

DATE:
05/28/2020

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Reviewer certifies the report has been reviewed and is ready for release to the Client to support work product and/or deliverables without exception.

REVIEWED BY:
DAVID HILL, PE, CHMM, CPEA

DATE:
6/1/2020

This report presents observations and a record of field activities relating to our services only. Other work may have been performed on this project that was not under the direction or guidance of DH Environmental, Inc. Our work did not include supervision or direction of the work of others. DH Environmental, Inc. is not responsible for job or site safety of others on this project. **DISCLAIMER:** Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by DH Environmental, Inc. and will serve as the official document of record.

ATTACHMENTS:

- ☒ Site Photos
 ☐ Sketch
 ☐ Chain of Custody
 ☐ Other:
☐ Sample Log
 ☒ Drawing(s)
 ☐ Calibration Records

Photo Log
Pit Slag Waste Characterization Sampling
5/28/2020
Star Forge, Tukwila, Washington



Photo 1: Sample AOD-WC-1 inside the AOD Pit. View to the NW.



Photo 2: Sample AOD-WC-2 inside the AOD Pit. View to the W.



Photo 3: Sample AOD-WC-3 and -4, along the south wall of the AOD Pit. View to the S.



Photo 4: Sample AFP-WC-1, inside the AFP Pit. View to the S.



Photo 5: Sample AFP-WC-2, at the base of the AFP Pit. View to the S.



Photo 6: Sample AFP-WC-3, on the north wall of the AFP Pit. View to the S.

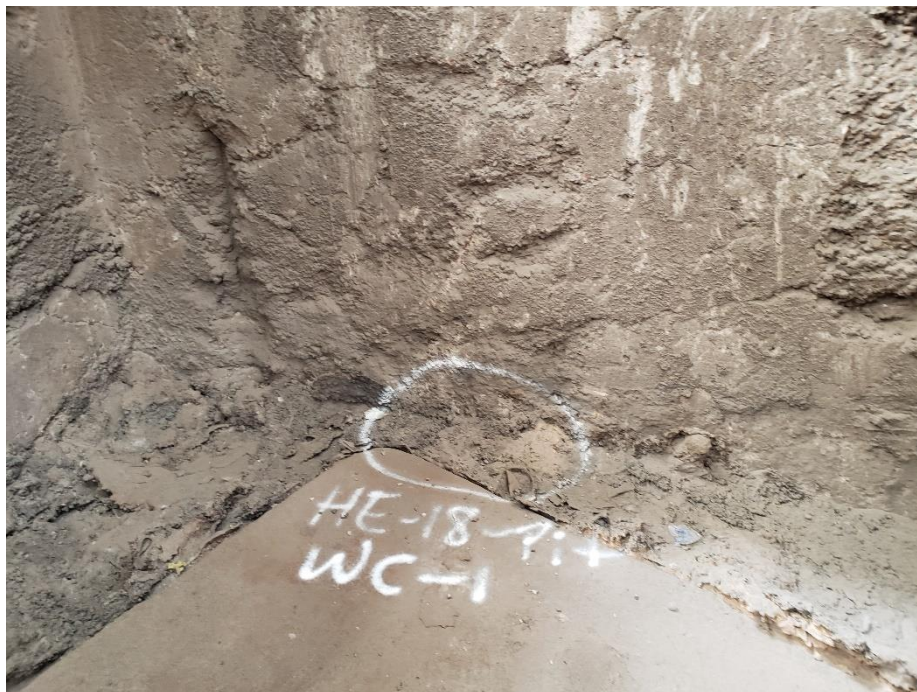


Photo 7: Sample HE-18-Pit-WC-1, at the base of the HE-18 Pit (Ingot Mold Pit). View to the SW.



Photo 8: Sample HE-18-Pit-WC-2. Sample not marked in photo, but was collected from the rust colored slag-like material located along the north wall of the HE-18 pit (Ingot Mold Pit). View to the N.

Sample ID: AFP-WC-1									
Units Displayed as		mg/kg	Conversion Factor	Conversions	Concentration (mass %)				
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	100	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	16000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.60E+00	
Copper	7440-50-8	950	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		9.50E-02			
Lead	7439-92-1	56	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				5.60E-03	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	6700	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					6.70E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	160	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.60E-02		
Total (SUM)					0.0000000	0.0950000	0.0160000	1.6056002	0.6700
Enter Category Mass % Here		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation	
		0.00E+00	9.50E-02	1.60E-02	1.61E+00	6.70E-01			
		0.00E+00	9.50E-03	1.60E-04	1.61E-03	6.70E-05	0.0113326	WT02	
Sources	1	RTECS: Registry of Toxic Effects of Chemical Substances							
	2	HSDB: Hazardous Substances Data Bank, National Library of Medicine							
	3	ECOTOX Database: United States Environmental Protection Agency							

Sample ID: AFP-WC-2									
						Conversions			
						1 ng/kg = 10 ⁻¹⁰ % (mass %)			
						1 ug/kg = 10 ⁻⁷ %			
						1 mg/kg = 10 ⁻⁴ %			
Units Displayed as		mg/kg	Conversion Factor						
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	57	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	2.3	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.30E-04				
Chromium	7440-47-3	28000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.80E+00	
Copper	7440-50-8	1000	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ²	A		1.00E-01			
Lead	7439-92-1	210	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.10E-02	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	9400	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					9.40E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	710	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ²	B			7.10E-02		
Total (SUM)					0.0002300	0.1000000	0.0710000	2.8210000	0.9400
		$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation	
Enter Category Mass % Here →		2.30E-04	1.00E-01	7.10E-02	2.82E+00	9.40E-01			
		2.30E-04	1.00E-02	7.10E-04	2.82E-03	9.40E-05	0.0138550	WT02	
Sources		1 RTECS: Registry of Toxic Effects of Chemical Substances 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine 3 ECOTOX Database: United States Environmental Protection Agency							

Sample ID: AOD-WC-1									
				Conversions	1 ng/kg = 10 ⁻⁶ -10 % (mass %)				
					1 ug/kg = 10 ⁻⁷ %				
					1 mg/kg = 10 ⁻⁴ %				
Units Displayed as			mg/kg	Conversion Factor	0.0001	Concentration (mass %)			
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B					
Barium	7440-39-3	23	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X					
Chromium	7440-47-3	48000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C				4.80E+00	
Copper	7440-50-8	1500	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A		1.50E-01			
Lead	7439-92-1	29	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C				2.90E-03	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A					
Nickel	7440-02-0	18000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D					1.80E+00
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X					
Zinc	7440-66-6	130	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B			1.30E-02		
Total (SUM)					0.0000000	0.1500000	0.0130000	4.8029000	1.8000
		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation	
Enter Category Mass % Here →		0.00E+00	1.50E-01	1.30E-02	4.80E+00	1.80E+00			
		0.00E+00	1.50E-02	1.30E-04	4.80E-03	1.80E-04	0.0201129	WT02	
Sources	1	RTECS: Registry of Toxic Effects of Chemical Substances							
	2	HSDB: Hazardous Substances Data Bank, National Library of Medicine							
	3	ECOTOX Database: United States Environmental Protection Agency							

Sample ID: AOD-WC-3									
						Conversions			
						1 ng/kg = 10 ⁻¹⁰ % (mass %)			
						1 ug/kg = 10 ⁻⁷ %			
						1 mg/kg = 10 ⁻⁴ %			
		Units Displayed as		mg/kg		0.0001		Concentration (mass %)	
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	20	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	16000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.60E+00	
Copper	7440-50-8	500	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		5.00E-02			
Lead	7439-92-1	32	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				3.20E-03	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	7800	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.80E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	110	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ²	B			1.10E-02		
Total (SUM)					0.0000000	0.0500000	0.0110000	1.6032000	0.7800
		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation	
Enter Category Mass % Here →		0.00E+00	5.00E-02	1.10E-02	1.60E+00	7.80E-01			
		0.00E+00	5.00E-03	1.10E-04	1.60E-03	7.80E-05	0.0067912	WT02	
Sources	1	RTECS: Registry of Toxic Effects of Chemical Substances							
	2	HSDB: Hazardous Substances Data Bank, National Library of Medicine							
	3	ECOTOX Database: United States Environmental Protection Agency							

Sample ID: AOD-WC-4									
						Conversions			
						1 ng/kg = 10 ⁻⁶ -10 ⁻⁷ % (mass %)			
						1 ug/kg = 10 ⁻⁶ -7 %			
						1 mg/kg = 10 ⁻⁴ %			
Units Displayed as		mg/kg		0.0001		Concentration (mass %)			
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	16	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	65000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				6.50E+00	
Copper	7440-50-8	1200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ²	A		1.20E-01			
Lead	7439-92-1	55	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				5.50E-03	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	11000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.10E+00
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	160	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.60E-02		
Total (SUM)					0.0000000	0.1200000	0.0160000	6.5055000	1.1000
		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation	
Enter Category Mass % Here →		0.00E+00	1.20E-01	1.60E-02	6.51E+00	1.10E+00			
		0.00E+00	1.20E-02	1.60E-04	6.51E-03	1.10E-04	0.0187755	WT02	
Sources	1	RTECS: Registry of Toxic Effects of Chemical Substances							
	2	HSDB: Hazardous Substances Data Bank, National Library of Medicine							
	3	ECOTOX Database: United States Environmental Protection Agency							

Sample ID: HE-18-Pit-WC-1									
				Conversions		1 ng/kg = 10 ⁻¹⁰ % (mass %)			
						1 ug/kg = 10 ⁻⁷ %			
						1 mg/kg = 10 ⁻⁴ %			
Units Displayed as		mg/kg	0.0001	Concentration (mass %)					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	59	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			5.90E-03		
Barium	7440-39-3	11	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	68000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				6.80E+00	
Copper	7440-50-8	2100	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ²	A		2.10E-01			
Lead	7439-92-1	44	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.40E-03	
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	25000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L/96 hr ³	D					2.50E+00
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/96hr ³	X					
Zinc	7440-66-6	170	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ²	B			1.70E-02		
Total (SUM)					0.0000000	0.2100000	0.0229000	6.8044008	2.5000
		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation	
Enter Category Mass % Here →		0.00E+00	2.10E-01	2.29E-02	6.80E+00	2.50E+00			
		0.00E+00	2.10E-02	2.29E-04	6.80E-03	2.50E-04	0.0282834	WT02	
Sources	1	RTECS: Registry of Toxic Effects of Chemical Substances							
	2	HSDB: Hazardous Substances Data Bank, National Library of Medicine							
	3	ECOTOX Database: United States Environmental Protection Agency							

[illegible]



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 2, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-208

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on May 28, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
Samples Submitted: May 28, 2020
Laboratory Reference: 2005-208
Project: Star Forge

Case Narrative

Samples were collected on May 28, 2020 and received by the laboratory on May 28, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all Solid sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

Method 5035A VOA vials were not provided for samples AOD-WC-2, AOD-WC-4, and HE-18-Pit-WC-2. The samples were therefore extracted from one-gallon Ziploc bags and analyzed. In addition, the bag for sample HE-18-Pit-WC-2 was received by the lab unzipped (open). Samples AOD-WC-2 and HE-18-Pit-WC-2 had to be hammered outside of the bag to break up the samples for analysis. Due to all of these factors, some loss of volatiles may have occurred.

Some MTCA Method A cleanup levels are non-achievable for sample AOD-WC-4 due to the sample matrix.

Sample HE-18-Pit-WC-1 had one surrogate that was low after the first analysis. The second VOA vial containing a stir bar was prepped for reanalysis but broke during vortexing. Method 5035A states that for low-level VOC analysis the purge-and-trap system employed must be capable of agitating the sealed sample during the purging process. The purge-and-trap system that OnSite Environmental utilizes for the analysis of low-level VOCs has a stir motor that spins a magnetic stir bar within the sample thereby agitating the sample and providing more efficient purging. Due to the aforementioned failed analyses, a VOA vial without a stir bar was analyzed and reported for the low-level VOC analysis.

Total Metals EPA 6010D/7471B Analysis

Due to the high concentration of Chromium, Copper, Nickel in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 97 % for Chromium, 101% for Copper and 105% for Nickel.

The duplicate RPD for Copper is outside control limits due to sample inhomogeneity.

The Matrix Spike/ Matrix Spike Duplicate recoveries for Barium, Cadmium, Lead, Selenium and Zinc are outside control limits due to matrix effects. The Spike Blank recovery was 97% for Barium, 93% for Cadmium, 95% for Lead, 101% for Selenium and 102% for Zinc.

The Matrix Spike/Matrix Spike Duplicate RPD for Selenium is outside control limits due to matrix effect,

The practical quantitation limit was elevated for Arsenic, Cadmium, Selenium and Silver due to interferences present in the sample.

The samples AOD-WC-2 (05-208-02), AOD-WC-4(05-208-04), HE-18-Pit-WC-1 (05-208-07) and HW-18-Pit-WC-2 (05-208-09) were reported on a wet weight basis.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-1					
Laboratory ID:	05-208-01					
Dichlorodifluoromethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.0066	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0066	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-1					
Laboratory ID:	05-208-01					
1,1,2-Trichloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0013	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0033	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00066	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	87	74-131				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	115	71-130				



Date of Report: June 2, 2020
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-2					
Laboratory ID:	05-208-02					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.010	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.010	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-2					
Laboratory ID:	05-208-02					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0051	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	74-131				
Toluene-d8	99	78-128				
4-Bromofluorobenzene	124	71-130				



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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-3					
Laboratory ID:	05-208-03					
Dichlorodifluoromethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.0093	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0092	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-3					
Laboratory ID:	05-208-03					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
<i>Dibromofluoromethane</i>	86	74-131				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	111	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-4					
Laboratory ID:	05-208-04					
Dichlorodifluoromethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.24	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.24	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.041	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.12	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.12	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.12	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.024	EPA 8260D	5-29-20	5-29-20	



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-4					
Laboratory ID:	05-208-04					
1,1,2-Trichloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.049	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.024	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.12	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.12	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.12	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.024	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	88	74-131				
Toluene-d8	92	78-128				
4-Bromofluorobenzene	110	71-130				



Date of Report: June 2, 2020
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-1					
Laboratory ID:	05-208-05					
Dichlorodifluoromethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Acetone	0.0091	0.0090	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0089	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0015	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Benzene	0.0021	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-1					
Laboratory ID:	05-208-05					
1,1,2-Trichloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0018	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0045	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	112	71-130				



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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-2					
Laboratory ID:	05-208-06					
Dichlorodifluoromethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.0094	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0093	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-2					
Laboratory ID:	05-208-06					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0019	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0047	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	86	74-131				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	110	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-3					
Laboratory ID:	05-208-07					
Dichlorodifluoromethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.0084	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0083	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0014	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Benzene	0.0059	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-3					
Laboratory ID:	05-208-07					
1,1,2-Trichloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0017	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0042	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00084	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	87	74-131				
Toluene-d8	97	78-128				
4-Bromofluorobenzene	113	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: HE-18-Pit-WC-1						
Laboratory ID: 05-208-08						
Dichlorodifluoromethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.0078	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0059	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0013	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	HE-18-Pit-WC-1					
Laboratory ID:	05-208-08					
1,1,2-Trichloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	0.0011	0.00078	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	0.0053	0.0016	EPA 8260D	5-30-20	5-30-20	
o-Xylene	0.0016	0.00078	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0039	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.00078	EPA 8260D	5-30-20	5-30-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	74-131				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: HE-18-Pit-WC-2						
Laboratory ID: 05-208-09						
Dichlorodifluoromethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Acetone	0.041	0.0092	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0091	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
2-Butanone	0.0049	0.0046	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	HE-18-Pit-WC-2					
Laboratory ID:	05-208-09					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	0.0030	0.0018	EPA 8260D	5-29-20	5-29-20	
o-Xylene	0.00099	0.00092	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0046	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260D	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	88	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	117	71-130				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloromethane	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromomethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloroethane	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Acetone	ND	0.010	EPA 8260D	5-29-20	5-29-20	
Iodomethane	ND	0.0099	EPA 8260D	5-29-20	5-29-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	5-29-20	5-29-20	
Methylene Chloride	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Butanone	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chloroform	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Benzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Toluene	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-29-20	5-29-20	
o-Xylene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Styrene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromoform	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
Naphthalene	ND	0.0050	EPA 8260D	5-29-20	5-29-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>90</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloromethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroethane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Acetone	ND	0.010	EPA 8260D	5-30-20	5-30-20	
Iodomethane	ND	0.0075	EPA 8260D	5-30-20	5-30-20	
Carbon Disulfide	ND	0.0016	EPA 8260D	5-30-20	5-30-20	
Methylene Chloride	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Butanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chloroform	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Benzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260D	5-30-20	5-30-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Toluene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	



Date of Report: June 2, 2020
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 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-30-20	5-30-20	
o-Xylene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Styrene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromoform	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
Naphthalene	ND	0.0050	EPA 8260D	5-30-20	5-30-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-30-20	5-30-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



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Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0529S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0528	0.0528	0.0500	0.0500	106	106	55-126	0	17	
Benzene	0.0499	0.0496	0.0500	0.0500	100	99	65-121	1	16	
Trichloroethene	0.0566	0.0579	0.0500	0.0500	113	116	74-126	2	16	
Toluene	0.0499	0.0508	0.0500	0.0500	100	102	71-121	2	16	
Chlorobenzene	0.0495	0.0508	0.0500	0.0500	99	102	72-123	3	15	
Surrogate:										
Dibromofluoromethane					91	86	74-131			
Toluene-d8					97	96	78-128			
4-Bromofluorobenzene					104	105	71-130			
Laboratory ID:	SB0530S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0523	0.0483	0.0500	0.0500	105	97	55-126	8	17	
Benzene	0.0478	0.0444	0.0500	0.0500	96	89	65-121	7	16	
Trichloroethene	0.0515	0.0500	0.0500	0.0500	103	100	74-126	3	16	
Toluene	0.0504	0.0483	0.0500	0.0500	101	97	71-121	4	16	
Chlorobenzene	0.0539	0.0523	0.0500	0.0500	108	105	72-123	3	15	
Surrogate:										
Dibromofluoromethane					97	96	74-131			
Toluene-d8					98	98	78-128			
4-Bromofluorobenzene					100	99	71-130			



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AOD-WC-1				
Laboratory ID:		05-208-01				
Naphthalene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
2-Methylnaphthalene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
1-Methylnaphthalene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthylene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Fluorene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Phenanthrene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Anthracene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Fluoranthene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Pyrene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]anthracene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Chrysene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[b]fluoranthene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo(j,k)fluoranthene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]pyrene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Dibenz[a,h]anthracene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[g,h,i]perylene	ND	0.0070	EPA 8270E/SIM	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	70	46 - 113				
Pyrene-d10	88	45 - 114				
Terphenyl-d14	91	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AFP-WC-1				
Laboratory ID:		05-208-05				
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	87	46 - 113				
Pyrene-d10	100	45 - 114				
Terphenyl-d14	94	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-29-20	5-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	46 - 113				
Pyrene-d10	90	45 - 114				
Terphenyl-d14	90	49 - 121				



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
 Laboratory Reference: 2005-208
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0529S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0621	0.0637	0.0833	0.0833	75	76	60 - 116	3	16	
Acenaphthylene	0.0691	0.0666	0.0833	0.0833	83	80	60 - 125	4	15	
Acenaphthene	0.0696	0.0674	0.0833	0.0833	84	81	60 - 121	3	15	
Fluorene	0.0755	0.0757	0.0833	0.0833	91	91	65 - 126	0	15	
Phenanthrene	0.0749	0.0747	0.0833	0.0833	90	90	65 - 120	0	15	
Anthracene	0.0783	0.0766	0.0833	0.0833	94	92	67 - 125	2	15	
Fluoranthene	0.0788	0.0806	0.0833	0.0833	95	97	66 - 125	2	15	
Pyrene	0.0810	0.0792	0.0833	0.0833	97	95	62 - 125	2	15	
Benzo[a]anthracene	0.0923	0.0879	0.0833	0.0833	111	106	72 - 129	5	15	
Chrysene	0.0756	0.0776	0.0833	0.0833	91	93	66 - 123	3	15	
Benzo[b]fluoranthene	0.0848	0.0772	0.0833	0.0833	102	93	68 - 128	9	15	
Benzo(j,k)fluoranthene	0.0794	0.0839	0.0833	0.0833	95	101	63 - 128	6	16	
Benzo[a]pyrene	0.0830	0.0785	0.0833	0.0833	100	94	66 - 130	6	15	
Indeno(1,2,3-c,d)pyrene	0.0799	0.0799	0.0833	0.0833	96	96	63 - 135	0	15	
Dibenz[a,h]anthracene	0.0804	0.0791	0.0833	0.0833	97	95	65 - 130	2	15	
Benzo[g,h,i]perylene	0.0817	0.0807	0.0833	0.0833	98	97	66 - 127	1	15	
Surrogate:										
2-Fluorobiphenyl					81	75	46 - 113			
Pyrene-d10					93	90	45 - 114			
Terphenyl-d14					88	89	49 - 121			



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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: AOD-WC-1						
Laboratory ID:	05-208-01					
Aroclor 1016	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.053	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				
Client ID: AOD-WC-2						
Laboratory ID:	05-208-02					
Aroclor 1016	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.063	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	105	46-125				
Client ID: AOD-WC-3						
Laboratory ID:	05-208-03					
Aroclor 1016	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.16	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	100	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-4					
Laboratory ID:	05-208-04					
Aroclor 1016	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.19	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	96	46-125				
Client ID:	AFP-WC-1					
Laboratory ID:	05-208-05					
Aroclor 1016	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.088	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	46-125				
Client ID:	AFP-WC-2					
Laboratory ID:	05-208-06					
Aroclor 1016	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.10	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-3					
Laboratory ID:	05-208-07					
Aroclor 1016	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.097	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	94	46-125				
Client ID:	HE-18-Pit-WC-1					
Laboratory ID:	05-208-08					
Aroclor 1016	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	46-125				
Client ID:	HE-18-Pit-WC-2					
Laboratory ID:	05-208-09					
Aroclor 1016	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.061	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	107	46-125				



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 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
Aroclor 1016	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-29-20	5-29-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	86	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0529S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.455	0.469	0.500	0.500	N/A	91	94	50-134	3	18	
Surrogate:											
DCB						90	89	46-125			



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 Project: Star Forge

TOTAL METALS
EPA 6010D/7471B

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-1					
Laboratory ID:	05-208-01					
Arsenic	ND	53	EPA 6010D	5-29-20	6-1-20	U1
Barium	23	5.3	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.1	EPA 6010D	5-29-20	6-1-20	U1
Chromium	48000	260	EPA 6010D	5-29-20	5-29-20	
Copper	1500	11	EPA 6010D	5-29-20	6-1-20	
Lead	29	11	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.26	EPA 7471B	6-1-20	6-1-20	
Nickel	18000	260	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	32	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.3	EPA 6010D	5-29-20	6-1-20	U1
Zinc	130	5.3	EPA 6010D	5-29-20	5-29-20	

Client ID:	AOD-WC-2					
Laboratory ID:	05-208-02					
Arsenic	ND	50	EPA 6010D	5-29-20	5-29-20	U1
Barium	16	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	32000	250	EPA 6010D	5-29-20	5-29-20	
Copper	870	10	EPA 6010D	5-29-20	5-29-20	
Lead	27	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	9900	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	30	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	10	EPA 6010D	5-29-20	5-29-20	U1
Zinc	58	5.0	EPA 6010D	5-29-20	5-29-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-3					
Laboratory ID:	05-208-03					
Arsenic	ND	50	EPA 6010D	5-29-20	5-29-20	U1
Barium	20	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	16000	250	EPA 6010D	5-29-20	5-29-20	
Copper	500	10	EPA 6010D	5-29-20	5-29-20	
Lead	32	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	7800	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	30	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	110	5.0	EPA 6010D	5-29-20	5-29-20	

Client ID:	AOD-WC-4					
Laboratory ID:	05-208-04					
Arsenic	ND	50	EPA 6010D	5-29-20	5-29-20	U1
Barium	16	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	65000	250	EPA 6010D	5-29-20	5-29-20	
Copper	1200	10	EPA 6010D	5-29-20	5-29-20	
Lead	55	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	11000	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	30	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	160	5.0	EPA 6010D	5-29-20	5-29-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-1					
Laboratory ID:	05-208-05					
Arsenic	ND	50	EPA 6010D	5-29-20	5-29-20	U1
Barium	100	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	16000	250	EPA 6010D	5-29-20	5-29-20	
Copper	950	10	EPA 6010D	5-29-20	5-29-20	
Lead	56	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	6700	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	35	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	160	5.0	EPA 6010D	5-29-20	5-29-20	

Client ID:	AFP-WC-2					
Laboratory ID:	05-208-06					
Arsenic	ND	58	EPA 6010D	5-29-20	5-29-20	U1
Barium	57	5.8	EPA 6010D	5-29-20	5-29-20	
Cadmium	2.3	1.2	EPA 6010D	5-29-20	6-1-20	U1
Chromium	28000	290	EPA 6010D	5-29-20	5-29-20	
Copper	1000	12	EPA 6010D	5-29-20	5-29-20	
Lead	210	12	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.29	EPA 7471B	6-1-20	6-1-20	
Nickel	9400	1400	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	35	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.8	EPA 6010D	5-29-20	6-1-20	U1
Zinc	710	5.8	EPA 6010D	5-29-20	5-29-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-3					
Laboratory ID:	05-208-07					
Arsenic	ND	50	EPA 6010D	5-29-20	5-29-20	U1
Barium	41	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	43000	250	EPA 6010D	5-29-20	5-29-20	
Copper	820	10	EPA 6010D	5-29-20	5-29-20	
Lead	28	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	12000	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	35	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	89	5.0	EPA 6010D	5-29-20	5-29-20	

Client ID:	HE-18-Pit-WC-1					
Laboratory ID:	05-208-08					
Arsenic	59	50	EPA 6010D	5-29-20	6-1-20	U1
Barium	11	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	68000	250	EPA 6010D	5-29-20	5-29-20	
Copper	2100	10	EPA 6010D	5-29-20	5-29-20	
Lead	44	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	25000	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	50	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	170	5.0	EPA 6010D	5-29-20	5-29-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	HE-18-Pit-WC-2					
Laboratory ID:	05-208-09					
Arsenic	ND	50	EPA 6010D	5-29-20	6-1-20	U1
Barium	18	5.0	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	1.0	EPA 6010D	5-29-20	6-1-20	U1
Chromium	30000	250	EPA 6010D	5-29-20	5-29-20	
Copper	1400	10	EPA 6010D	5-29-20	5-29-20	
Lead	47	10	EPA 6010D	5-29-20	6-1-20	
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Nickel	17000	1300	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	75	EPA 6010D	5-29-20	6-1-20	U1
Silver	ND	5.0	EPA 6010D	5-29-20	5-29-20	U1
Zinc	140	5.0	EPA 6010D	5-29-20	5-29-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529SH1					
Arsenic	ND	5.0	EPA 6010D	5-29-20	5-29-20	
Barium	ND	2.5	EPA 6010D	5-29-20	5-29-20	
Cadmium	ND	0.50	EPA 6010D	5-29-20	5-29-20	
Chromium	ND	0.50	EPA 6010D	5-29-20	5-29-20	
Copper	ND	1.0	EPA 6010D	5-29-20	5-29-20	
Lead	ND	5.0	EPA 6010D	5-29-20	5-29-20	
Nickel	ND	2.5	EPA 6010D	5-29-20	5-29-20	
Selenium	ND	5.0	EPA 6010D	5-29-20	5-29-20	
Silver	ND	0.50	EPA 6010D	5-29-20	5-29-20	
Zinc	ND	2.5	EPA 6010D	5-29-20	5-29-20	
Laboratory ID:	MB0601S1					
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-208-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	22.1	25.6	NA	NA	NA	15	20	
Cadmium	ND	1.37	NA	NA	NA	NA	20	
Chromium	45800	49300	NA	NA	NA	8	20	
Copper	1400	1890	NA	NA	NA	30	20	L
Lead	27.3	32.5	NA	NA	NA	17	20	
Nickel	17500	20000	NA	NA	NA	13	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	122	125	NA	NA	NA	2	20	

Laboratory ID:	05-208-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	05-208-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	93.0	78.0	100	100	ND	93	78	75-125	18	20
Barium	95.3	87.1	100	100	22.1	73	65	75-125	9	20
Cadmium	31.4	31.0	50.0	50.0	ND	63	62	75-125	1	20
Chromium	43800	45300	100	100	45800	-2000	-500	75-125	3	20
Copper	1480	1430	50.0	50.0	1400	152	54	75-125	3	20
Lead	176	175	250	250	27.3	60	59	75-125	1	20
Nickel	17600	14400	100	100	17500	130	-3130	75-125	20	20
Selenium	30.0	42.8	100	100	ND	30	43	75-125	35	20
Silver	20.8	18.9	25.0	25.0	ND	83	75	75-125	10	20
Zinc	171	170	100	100	122	49	48	75-125	1	20

Laboratory ID:	05-208-01									
Mercury	0.454	0.498	0.500	0.500	0.00500	90	99	80-120	9	20



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 Samples Submitted: May 28, 2020
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-1					
Laboratory ID:	05-208-01					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.68	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	AOD-WC-2					
Laboratory ID:	05-208-02					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.022	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	AOD-WC-3					
Laboratory ID:	05-208-03					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



Date of Report: June 2, 2020
 Samples Submitted: May 28, 2020
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AOD-WC-4					
Laboratory ID:	05-208-04					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	AFP-WC-1					
Laboratory ID:	05-208-05					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.21	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID:	AFP-WC-2					
Laboratory ID:	05-208-06					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.26	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	0.12	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AFP-WC-3					
Laboratory ID:	05-208-07					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID: HE-18-Pit-WC-1
 Laboratory ID: 05-208-08

Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	

Client ID: HE-18-Pit-WC-2
 Laboratory ID: 05-208-09

Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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 Laboratory Reference: 2005-208
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID: MB0602TM1						
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID: MB0602T11						
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Laboratory ID: MB0602TM2						
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID: MB0602T2						
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-208-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	ND	ND	NA	NA		NA	NA	NA	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.684	0.654	NA	NA		NA	NA	4	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-208-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.376	0.380	NA	NA		NA	NA	1	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-138-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	05-208-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.79	3.78	4.00	4.00	ND	95	95	75-125	0	20
Barium	3.69	3.67	4.00	4.00	ND	92	92	75-125	1	20
Cadmium	1.96	1.95	2.00	2.00	ND	98	98	75-125	1	20
Chromium	4.21	4.21	4.00	4.00	0.684	88	88	75-125	0	20
Lead	8.54	8.50	10.0	10.0	ND	85	85	75-125	0	20
Selenium	3.88	3.91	4.00	4.00	ND	97	98	75-125	1	20
Silver	0.904	0.908	1.00	1.00	ND	90	91	75-125	0	20
Laboratory ID:	05-208-01									
Mercury	0.0490	0.0497	0.0500	0.0500	ND	98	99	75-125	1	20
Laboratory ID:	05-138-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.91	3.91	4.00	4.00	ND	98	98	75-125	0	20
Barium	3.95	3.96	4.00	4.00	0.376	89	90	75-125	0	20
Cadmium	1.94	1.97	2.00	2.00	ND	97	98	75-125	1	20
Chromium	3.36	3.39	4.00	4.00	ND	84	85	75-125	1	20
Lead	8.35	8.35	10.0	10.0	ND	84	84	75-125	0	20
Selenium	3.91	3.83	4.00	4.00	ND	98	96	75-125	2	20
Silver	0.894	0.896	1.00	1.00	ND	89	90	75-125	0	20
Laboratory ID:	05-138-01									
Mercury	0.0472	0.0483	0.0500	0.0500	ND	94	97	75-125	2	20



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Samples Submitted: May 28, 2020
Laboratory Reference: 2005-208
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
AOD-WC-1	05-208-01	5	5-29-20
AOD-WC-3	05-208-03	1	5-29-20
AFP-WC-1	05-208-05	0	5-29-20
AFP-WC-2	05-208-06	13	5-29-20
AFP-WC-3	05-208-07	0	5-29-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 15, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-208B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on May 28, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID's: AOD-WC-1; AFP-WC-2; HE-18-Pit-WC-1

Report date: June 15, 2020

Submitted to:

Onsite Environmental
14648 NE 95th Street
Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on three samples submitted by Onsite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The samples, identified as AOD-WC-1, AFP-WC-2 and HE-18-Pit-WC-1 were received in the laboratory on June 8, 2020. Upon arrival at the laboratory the samples were inspected and contents verified against information provided on the chain-of-custody form. The samples were stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number's	2006-009; 2006-010; 2006-011
Sample ID's	AOD-WC-1; AFP-WC-2; HE-18-Pit-WC-1
Test initiation date; time	6/10/2020; 0855h
Test termination date; time	6/14/2020; 0910h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The samples were tested using fish received on April 22, 2022.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	52 days post swim-up (hatch date 4/1/2020)
Mean weight	0.36 g
Mean length	35 mm
Ratio of longest to shortest	1.2
Loading	0.59 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on samples AOD-WC-1, AFP-WC-2 and HE-18-Pit-WC-1 are contained in Table 3. There was no mortality in the control or in any of the samples. Based on these results, the samples do not designate as either dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
AOD-WC-1	10	30	0	None
	100	30	0	
AFP-WC-2	10	30	0	None
	100	30	0	
HE-18-Pit-WC-1	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated June 4, 2020. The LC₅₀ of 138 g/L copper fell within the acceptable range of mean $\pm$ two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 29.8 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2009. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised June 2009.

Appendix A
***Oncorhynchus mykiss* Dangerous Waste Toxicity Test**
Raw Bench Sheets

Dangerous Waste Toxicity Test

Client: **OKS TFF FENNEROKHAEVITK**

Sample ID: AQB-WC-1, AFP-WC-2, HE-18-PIT-WC-1

Test #: 2006-009, 2006-016, 2006-011

Log In #: T20-167; T20-170; T20-171

Start Date & Time: 6/10/2020 0855

End Date & Time: 6/14/2020 09:10

Test Organism: *Oncorhynchus mykiss*

Test Protocol: Washington State Department of Ecology Publ. 80-12

Rep	Conc.	Cont #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH (units)					Conductivity (umhos/cm)					Temperature (°C)					Percent Survival	
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96							
1	CON	12	10	10	10	10	8.9	8.5	8.1	7.8	7.5	7.35	7.63	7.45	7.27	7.15	387							307	12.1	12.0	12.3	12.4	11.5
2		8	10	10	10	10	9.1	8.7	8.4	8.2	8.1	7.86	7.61	7.43	7.25	7.15	381							315					
3		21	10	10	10	10	9.1	8.3	8.0	7.9	7.7	7.86	7.64	7.44	7.22	7.14	384							314					
1	10PPM	24	10	10	10	10	9.0	8.5	8.2	8.0	7.8	7.84	7.58	7.47	7.28	7.11	383							344	12.1	12.0	12.1	12.5	12.1
2	T30-169	13	10	10	10	10	9.2	8.6	8.3	8.2	8.1	7.82	7.62	7.46	7.24	7.13	390							397					
3	AOD	2	10	10	10	10	9.0	8.3	8.1	7.8	7.5	7.85	7.57	7.47	7.24	7.15	381							315					
1	100PPM	18	10	10	10	10	9.8	8.3	8.0	7.7	7.5	7.85	7.59	7.46	7.25	7.15	391							393	12.2	11.9	12.1	12.3	12.0
2	T30-169	9	10	10	10	10	8.9	8.4	8.3	8.1	8.0	7.82	7.64	7.47	7.25	7.12	394							394					
3	AOD	22	10	10	10	10	8.9	8.5	8.2	8.0	7.7	7.51	7.62	7.46	7.23	7.14	391							300					
1	10PPM	10	10	10	10	10	9.0	8.5	8.1	7.8	7.4	7.80	7.61	7.43	7.22	7.13	390							394	12.2	11.8	12.0	12.3	11.9
2	T30-170	3	10	10	10	10	9.1	8.6	8.4	8.1	8.0	7.81	7.57	7.44	7.19	7.11	393							392					
3	AEP	13	10	10	10	10	9.1	8.4	8.1	7.7	7.6	7.79	7.58	7.45	7.23	7.14	391							397					
1	100PPM	19	10	10	10	10	9.0	8.4	8.0	7.8	7.6	7.82	7.63	7.47	7.24	7.14	391							398	12.2	11.8	12.1	12.4	11.9
2	T30-170	14	10	10	10	10	9.0	8.2	8.0	7.6	7.5	7.84	7.59	7.45	7.25	7.15	384							394					
3	AEP	4	10	10	10	10	8.8	8.5	8.3	8.1	8.0	7.82	7.63	7.49	7.25	7.12	397							392					
1	10PPM	25	10	10	10	10	8.8	8.6	8.5	8.1	7.7	7.81	7.58	7.46	7.27	7.11	387							393	12.1	12.1	12.0	12.2	11.9
2	T30-171	5	10	10	10	10	9.1	8.5	8.2	8.0	7.8	7.82	7.64	7.48	7.26	7.14	383							394					
3	ME	20	10	10	10	10	9.1	8.4	8.2	7.9	7.8	7.84	7.65	7.45	7.25	7.13	389							396					
1	100PPM	5	10	10	10	10	9.2	8.7	8.3	8.1	7.9	7.81	7.59	7.46	7.24	7.11	389							298	12.2	12.0	12.1	12.4	11.5
2	T30-171	27	10	10	10	10	8.9	8.5	8.1	7.9	7.5	7.82	7.61	7.45	7.24	7.14	391							294					
3	ME	26	10	10	10	10	8.8	8.4	8.2	8.0	7.9	7.82	7.63	7.49	7.25	7.16	391							293					
Technician Initials			BT	BT	BT	BT	BT	BT	BT	BT	BT																		

Sample	Alk. (init.)	Hard (int.)	Alk. (fin.)	Hard (fin.)	Chlorine	Animal Source:	Date Received:	Date of Hatch:	Date of Swim up:
	(mg/L as CaCO ₃)				(mg/L Cl ₂)				
Control	64	84	64	84	40.03				
40D	64	84	64	84					
4FD	64	84	64	84					
HE	64	84	64	84					
						Length max/min:			
						Lengths(mm):			
						Weights (g):			
						Loadings:			

Dilution Water Source: MHW 045 QA Check OK

QA Check ☒

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

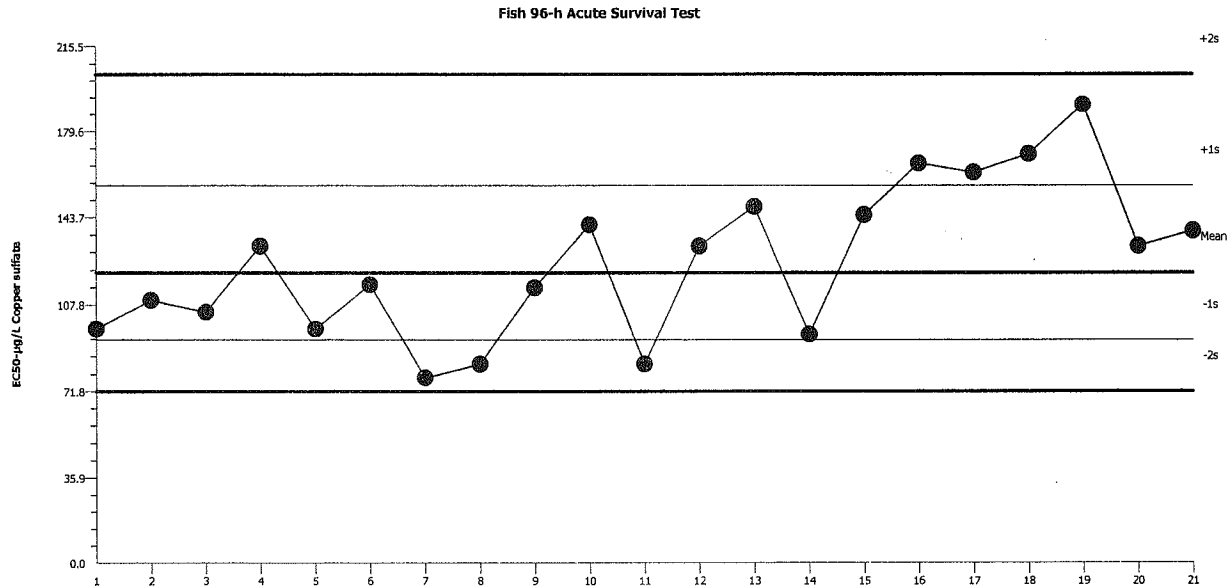
Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)
Protocol: Not Applicable

Organism: Oncorhynchus mykiss (Rainbow Tro
Endpoint: 96h Survival Rate

Material: Copper sulfate
Source: Reference Toxicant-REF



Mean: 121
Sigma: NA

Count: 20
CV: 29.80%

-1s Warning Limit: 93.24
+1s Warning Limit: 157.1

-2s Action Limit: 71.84
+2s Action Limit: 203.9

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2018	Aug	30	97.72	-23.31	-0.8203			01-6631-0399	00-2872-0274
2		Oct	5	109.7	-11.34	-0.3773			09-8718-1650	14-5303-2875
3		Nov	6	104.7	-16.3	-0.5545			20-5282-8357	01-3690-0719
4		Dec	5	132	10.93	0.3314			01-4499-1094	07-5652-1457
5	2019	Jan	7	97.72	-23.31	-0.8203			03-9395-5944	09-6087-0434
6		Feb	9	116.1	-4.882	-0.1579			13-6349-4914	05-5573-8325
7		Mar	12	77.56	-43.47	-1.706	(-)		03-9582-1391	08-0363-8342
8		Apr	19	83.12	-37.9	-1.44	(-)		16-0727-4914	09-8538-6220
9		May	21	114.9	-6.156	-0.2002			13-0213-5670	12-8044-7071
10		Jun	21	140.6	19.61	0.5759			18-7198-9789	02-0902-1290
11		Jul	23	83.12	-37.9	-1.44	(-)		09-5504-5129	09-5466-8341
12		Aug	23	132	10.93	0.3314			06-2129-4986	03-1480-8200
13		Sep	20	148.1	27.08	0.7744			14-9775-6582	02-8526-9159
14		Oct	22	95.48	-25.54	-0.9089			08-2604-9852	04-5996-4554
15		Nov	25	144.7	23.7	0.6858			19-0900-7567	17-7816-6246
16		Dec	26	166.2	45.22	1.217	(+)		18-0718-4325	01-1522-2292
17	2020	Jan	27	162.5	41.43	1.129	(+)		15-7428-0290	09-7189-2054
18		Feb	28	170.1	49.11	1.306	(+)		09-4267-7927	12-7910-1452
19		Apr	1	191	69.94	1.749	(+)		13-6543-5000	21-3363-8866
20		May	1	132	10.93	0.3314			05-3085-5611	09-0915-7454
21		Jun	4	138.2	17.17	0.5086			02-5099-4531	13-4027-8146

CETIS Summary Report

Report Date: 08 Jun-20 12:43 (p 1 of 1)
Test Code: RA060420OM | 02-5099-4531

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	00-5413-6128	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	04 Jun-20 11:15	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	08 Jun-20 12:00	Species:	Oncorhynchus mykiss	Brine:	
Duration:	4d 1h	Source:	Trout Lodge Fish Farm	Age:	46d
Sample ID:	19-4490-5545	Code:	RA060420OM	Client:	Internal Lab
Sample Date:	04 Jun-20	Material:	Copper sulfate	Project:	
Receive Date:	04 Jun-20	Source:	Reference Toxicant		
Sample Age:	11h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-4329-7482	96h Survival Rate	50	100	70.71	15.5%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
13-4027-8146	96h Survival Rate	LC50	138.2	119.3	160.1		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.7667	0.7451	0.7882	0.7	0.8	0.03333	0.05774	7.53%	23.33%
200		3	0.2	0.1253	0.2747	0	0.4	0.1155	0.2	100.0%	80.0%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.7	0.8	0.8
200		0.4	0.2	0
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		7/10	8/10	8/10
200		4/10	2/10	0/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



RSI

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory: Rainier Environmental

Attention: Eric Tollefson

Address: 5013 Pacific Highway E, Suite 20, Fife, WA 98424

Phone Number: (253) 922-8898

Turnaround Request

	1 Day	2 Day	3 Day
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	1
14	1	1	1
15	1	1	1
16	1	1	1
17	1	1	1
18	1	1	1
19	1	1	1
20	1	1	1
21	1	1	1
22	1	1	1
23	1	1	1
24	1	1	1
25	1	1	1
26	1	1	1
27	1	1	1
28	1	1	1
29	1	1	1
30	1	1	1
31	1	1	1
32	1	1	1
33	1	1	1
34	1	1	1
35	1	1	1
36	1	1	1
37	1	1	1
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39	1	1	1
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90	1	1	1
91	1	1	1
92	1	1	1
93	1	1	1
94	1	1	1
95	1	1	1
96	1	1	1
97	1	1	1
98	1	1	1
99	1	1	1
100	1	1	1

Standard

Others:

Laboratory Reference #: 05-208

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number:

Project Name: Star Forge

[illegible]



Onsite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Turnaround Request (in working days)

(Check One)

☐ Same Day

☐ 1 Day

☒ 2 Days

☐ 3 Days

☐ Standard (7 Days)

☐ (other) _____

Laboratory Number:

05-208

Company: OH Environmental
Project Number: _____
Project Name: Star Forge
Project Manager: Dave Hill
Sampled by: N. Moxley / B. Johnson

Lab ID _____

Number of Containers

NWTPH-HCID
NWTPH-Gx/BTEX
NWTPH-Gx
NWTPH-Dx (☐ Acid / SG Clean-up)
Volatiles 8260C
Halogenated Volatiles 8260C
EDB EPA 8011 (Waters Only)
Semivolatiles 8270D/SIM (with low-level PAHs)
PAHs 8270D/SIM (low-level)
PCBs 8082A
Organochlorine Pesticides 8081B
Organophosphorus Pesticides 8270D/SIM
Chlorinated Acid Herbicides 8151A
Total RCRA Metals + Cu, Ni, Zn
Total MTCA Metals
TCLP Metals RCRA 8
HEM (oil and grease) 1664A

% Moisture

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Date	Time	Comments/Special Instructions
1	AOD-WC-1	5/28/20	1055	Soil	5	5-28-20	1510	<u>Added 6/4/2020 - (1 week TAT)</u>
2	AOD-WC-2		1120		1			
3	AOD-WC-3		1150		5			
4	AOD-WC-4		1200		1			
5	AFP-WC-1		1210		5			
6	AFP-WC-2		1220		5			
7	AFP-WC-3		1230		5			
8	HE-18-Pit-WC-1		1255		4			
9	HE-18-Pit-WC-2		1305		1			

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>OH Env.</u>	<u>5-28-20</u>	<u>1510</u>	<u>Added 6/4/2020 - (1 week TAT)</u>
<u>[Signature]</u>	<u>OSE</u>	<u>5/28/20</u>	<u>1510</u>	
Received				
Received				
Received				
Received				
Reviewed/Date				

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



DANGEROUS WASTE DESIGNATION FORM – Concrete Debris

Star Forge, Former Jorgenson Forge Property, Concrete Debris

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Concrete Debris

Generation Process: Concrete pile generated from repair of stormwater piping conveyance.

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 500 tons.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																		
		Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																		
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: All samples passed TCLP.	Total Metals ☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table><tr><td>Arsenic:</td><td>Up to 37.1</td><td>☐ ND</td></tr><tr><td>Barium:</td><td>Up to 110</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td>Up to 2.93</td><td>☐ ND</td></tr><tr><td>Chromium:</td><td>Up to 3,330</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>Up to 251</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td>Up to 0.34</td><td>☐ ND</td></tr><tr><td>Selenium:</td><td>Up to 3.12</td><td>☐ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td>Up to 444</td><td>☐ ND</td></tr><tr><td>Nickel:</td><td>Up to 1,240</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>Up to 384</td><td>☐ ND</td></tr></table> Comments: The highest value of all samples is shown.	Arsenic:	Up to 37.1	☐ ND	Barium:	Up to 110	☐ ND	Cadmium:	Up to 2.93	☐ ND	Chromium:	Up to 3,330	☐ ND	Lead:	Up to 251	☐ ND	Mercury:	Up to 0.34	☐ ND	Selenium:	Up to 3.12	☐ ND	Silver:		☒ ND	Copper:	Up to 444	☐ ND	Nickel:	Up to 1,240	☐ ND	Zinc:	Up to 384	☐ ND
Arsenic:	Up to 37.1	☐ ND																																		
Barium:	Up to 110	☐ ND																																		
Cadmium:	Up to 2.93	☐ ND																																		
Chromium:	Up to 3,330	☐ ND																																		
Lead:	Up to 251	☐ ND																																		
Mercury:	Up to 0.34	☐ ND																																		
Selenium:	Up to 3.12	☐ ND																																		
Silver:		☒ ND																																		
Copper:	Up to 444	☐ ND																																		
Nickel:	Up to 1,240	☐ ND																																		
Zinc:	Up to 384	☐ ND																																		

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Concrete	97-100
Soil	0-3



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☒ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100(5)(b)) on the highest levels detected for RCRA 8 Metals + Cu, Ni, and Zn along with PAH values. The book designation resulted in an equivalent concentration of 0.0052 which designates as Dangerous Waste, Toxic, WT02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b), Biological Testing Methods for the Designation of Dangerous Waste, Method 80-12. The fish bioassay resulted in zero fish mortality and this waste stream is therefore designated as non-dangerous waste.

Applicable Sample ID's: Star-Concrete-Pile, SP02-02-20200327, SP02-03-20200327, SP02-04-20200327, SP02-05-20200327

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2005-008, 2005-008B and 2005-008C)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solid

Designation Performed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-18-2020

Designation Reviewed by: David Hill, PE, CHMM, CPEA
Title: Principal Engineer

Date: 05-19-2020



1011 SW KLUCKITAT WAY
SUITE 107
SEATTLE, WASHINGTON 98134
(206) 293-3126

FIELD REPORT

File Name:
FR-1 Star Forge Site Waste
Sampling 5-1-20

Project:
Star Forge, LLC

Date:
5/1/2020

Owner:
Star Forge, LLC

Time of Arrival:
1000

Report Number:
1

Prepared by:
Stacy Fox, CHMM

Location:
8531 East Marginal Way

Time of Departure:
1130

Page:
Page 1 of 2

Purpose of Site Visit:
Waste Characterization Sampling

Weather:
Clear, sunny, ~65 deg F

Travel/Prep. Time:
1 hr

Project/Contract Number:
WO-01 – General Compliance and
Coordination

Upon arrival to the site I assessed personal safety hazards: ☒ Yes or ☐ Referred to Site Safety Plan and Safety Tailgate if applicable
Safety Hazards Were Addressed by: ☐ Performing tool box safety meeting ☒ Donning PPE, and observing safety standards

Site Visit Purpose and Details:

A site visit was conducted to collect samples from a concrete debris pile currently staged in the “Machine Shop” area at the Former Jorgensen Forge Site. Samples were collected for laboratory analysis for: VOCs, SVOCs, PCBs, & Total Metals (RCRA 8 + Cu, Ni, & Zn), and follow-on analysis for TCLP RCRA 8 Metals and Dangerous Waste Fish Bioassay, if necessary. The concrete pile was previously sampled by Sound Earth Strategies on 3/27/20. The purpose of this sampling event was to confirm the designation with additional data, and to collect a representative sample for a Dangerous Waste Fish Bioassay. We understand the concrete was generated to expose and repair underground piping that conveyed stormwater. The origin of the concrete was the “Heat Treat Area”.

Summary of Field Activities:

Concrete Pile Sample - A composite waste characterization sample was collected from the concrete pile. Due to the fact that the concrete pile was previously sampled by Sound Earth Strategies on 3/27/20, only one composite sample was collected to represent and complement the sampling already conducted. The composite sample consisted of six grab samples from the pile (three grab samples were collected from two opposite sides of the pile). The pile varied from large pieces of broken concrete to small granular sized particles. In addition, some soil overburden was commingled and removed with the concrete as was necessary to remove the concrete from the work area.

Photos of the Concrete Pile



Figure 1: Concrete Pile Facing South



Figure 2: Concrete Pile Facing Northwest

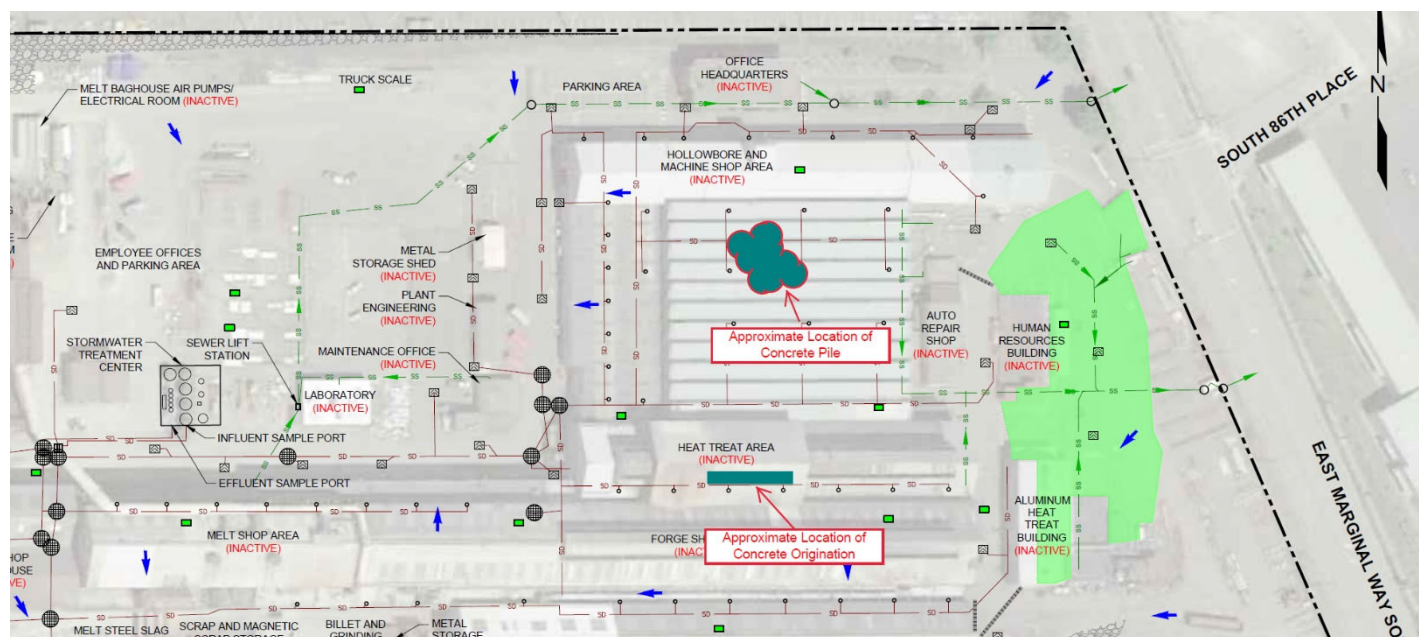


Figure 3: Approximate Location of Concrete Pile and Area of Origination

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Field Representative certifies the report was prepared with the intent to portray a true and accurate representation of the work performed or the observations made.

FIELD REPRESENTATIVE:
Stacy Fox, CHMM

DATE:
05/01/2020

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Reviewer certifies the report has been reviewed and is ready for release to the Client to support work product and/or deliverables without exception.

REVIEWED BY:
David Hill, PE, CHMM, CPEA

DATE:
5/8/2020

This report presents observations and a record of field activities relating to our services only. Other work may have been performed on this project that was not under the direction or guidance of DH Environmental, Inc. Our work did not include supervision or direction of the work of others. DH Environmental, Inc. is not responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by DH Environmental, Inc. and will serve as the official document of record.

ATTACHMENTS:

- ☐ Site Photos ☐ Sketch ☐ Chain of Custody ☐ Other: Field Map with sample locations
☐ Sample Log ☐ Drawing(s) ☐ Calibration Records

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete Debris
Applicable Sample IDs: 'Star-Concrete-Pile' (Lab Report 2005-008A)
Sample Date: 05-01-2020
 Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Conversions	Concentration (mass %)				
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	37.1	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			3.71E-03		
Barium	7440-39-3	110	LC50 Lepomis macrochirus (Bluegill) 19800 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	2.93	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.93E-04				
Chromium	7440-47-3	350	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				3.50E-02	
Copper	7440-50-8	444	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		4.44E-02			
Lead	7439-92-1	251	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.51E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ⁴	C					
Mercury	7439-97-6	0.34	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A		3.40E-05			
Nickel	7440-02-0	1240	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.24E-01
Selenium	7782-49-2	3.12	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					3.12E-04
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X					
Zinc	7440-66-6	384	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.84E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ¹	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ¹	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ¹	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ¹	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ¹	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ¹	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ¹	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ¹	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ¹	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ¹	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ²	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ¹	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ¹	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ¹	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ¹	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ¹	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ¹	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ¹	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ¹	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ¹	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ¹	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ¹	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ¹	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Concrete Debris
Applicable Sample IDs: 'Star-Concrete-Pile' (Lab Report 2005-008A)
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n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ¹	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ¹	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	0.018	1630 mg/kg Oral Rat LD50 ²	D					1.80E-06
1-methylnaphthalene	90-12-0	0.014	1840 mg/kg Oral Rate LD50 ²	D					1.40E-06
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	0.015	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ²	B			1.50E-06		
Phenanthrene	85-01-8	0.17	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ³	A		1.70E-05			
Anthracene	120-12-7	0.025	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	2.50E-06				
Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	0.29	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					2.90E-05
Benzo(a)anthracene	56-55-3	0.14	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					1.40E-05
Chrysene	218-01-9	0.16	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C					1.60E-05
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.206	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					2.06E-05
Benzo(a)pyrene	50-32-8	0.11	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					1.10E-05
Indeno(1,2,3-cd)pyrene	193-39-5	0.08	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					8.00E-06
Dibenz(a,h)anthracene	53-70-3	0.015	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					1.50E-06
Benzo(g,h,i)perylene	198-55-0	0.088	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					8.80E-06
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Chrysis latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ¹	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002955	0.0444510	0.0421115	0.0602089	0.1243

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.96E-04	4.45E-02	4.21E-02	6.02E-02	1.24E-01		
	2.96E-04	4.45E-03	4.21E-04	6.02E-05	1.24E-05	0.0052344	WT02

Sources 1 RTECS: Registry of Toxic Effects of Chemical Substances
 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 6, 2020

Stacy Fox
DH Environmental, Inc.
1011 SW Klickitat Way, Suite C-107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-008

Dear Stacy:

Enclosed are the analytical results and associated quality control data for samples submitted on May 1, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 6, 2020
Samples Submitted: May 1, 2020
Laboratory Reference: 2005-008
Project: Star Forge

Case Narrative

Samples were collected on May 1, 2020 and received by the laboratory on May 1, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Star-Concrete-Pile						
Laboratory ID: 05-008-01						
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Chloromethane	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Vinyl Chloride	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Bromomethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Chloroethane	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Trichlorofluoromethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloroethene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Acetone	0.034	0.014	EPA 8260D	5-5-20	5-5-20	
Iodomethane	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Carbon Disulfide	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Methylene Chloride	ND	0.0093	EPA 8260D	5-5-20	5-5-20	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Vinyl Acetate	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
2,2-Dichloropropane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
2-Butanone	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Bromochloromethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Chloroform	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Carbon Tetrachloride	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloropropene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Benzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2-Dichloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Trichloroethene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2-Dichloropropane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Dibromomethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Bromodichloromethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
2-Chloroethyl Vinyl Ether	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Methyl Isobutyl Ketone	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Toluene	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Star-Concrete-Pile						
Laboratory ID: 05-008-01						
1,1,2-Trichloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Tetrachloroethene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,3-Dichloropropane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
2-Hexanone	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Dibromochloromethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2-Dibromoethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Chlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Ethylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
m,p-Xylene	ND	0.0027	EPA 8260D	5-5-20	5-5-20	
o-Xylene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Styrene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Bromoform	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Isopropylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Bromobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
n-Propylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
2-Chlorotoluene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
4-Chlorotoluene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
tert-Butylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
sec-Butylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
p-Isopropyltoluene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
n-Butylbenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
1,2-Dibromo-3-chloropropane	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
Hexachlorobutadiene	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
Naphthalene	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260D	5-5-20	5-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	97	74-131				
<i>Toluene-d8</i>	89	78-128				
<i>4-Bromofluorobenzene</i>	88	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0505S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Chloromethane	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Bromomethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Chloroethane	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Acetone	ND	0.010	EPA 8260D	5-5-20	5-5-20	
Iodomethane	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Methylene Chloride	ND	0.0068	EPA 8260D	5-5-20	5-5-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
2-Butanone	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Chloroform	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Benzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Toluene	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	



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Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0505S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-5-20	5-5-20	
o-Xylene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Styrene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Bromoform	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
Naphthalene	ND	0.0050	EPA 8260D	5-5-20	5-5-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-5-20	5-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	94	74-131				
<i>Toluene-d8</i>	99	78-128				
<i>4-Bromofluorobenzene</i>	96	71-130				



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Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
					Recovery					
SPIKE BLANKS										
Laboratory ID:	SB0505S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0432	0.0443	0.0500	0.0500	86	89	55-126	3	18	
Benzene	0.0453	0.0465	0.0500	0.0500	91	93	65-121	3	16	
Trichloroethene	0.0484	0.0515	0.0500	0.0500	97	103	74-126	6	16	
Toluene	0.0480	0.0506	0.0500	0.0500	96	101	71-121	5	15	
Chlorobenzene	0.0502	0.0525	0.0500	0.0500	100	105	72-123	4	14	
Surrogate:										
Dibromofluoromethane					92	91	74-131			
Toluene-d8					97	97	78-128			
4-Bromofluorobenzene					97	96	71-130			



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Star-Concrete-Pile					
Laboratory ID:	05-008-01					
n-Nitrosodimethylamine	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Pyridine	ND	2.6	EPA 8270E	5-4-20	5-4-20	
Phenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Aniline	ND	1.3	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroethyl)ether	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Chlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,3-Dichlorobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,4-Dichlorobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Benzyl alcohol	ND	1.3	EPA 8270E	5-4-20	5-4-20	
1,2-Dichlorobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Methylphenol (o-Cresol)	ND	0.26	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroisopropyl)ether	ND	0.26	EPA 8270E	5-4-20	5-4-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.26	EPA 8270E	5-4-20	5-4-20	
n-Nitroso-di-n-propylamine	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Hexachloroethane	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Nitrobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Isophorone	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Nitrophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,4-Dimethylphenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroethoxy)methane	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,4-Dichlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,2,4-Trichlorobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Naphthalene	ND	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
4-Chloroaniline	ND	1.3	EPA 8270E	5-4-20	5-4-20	
Hexachlorobutadiene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
4-Chloro-3-methylphenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Methylnaphthalene	0.018	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
1-Methylnaphthalene	0.014	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Hexachlorocyclopentadiene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,4,6-Trichlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,3-Dichloroaniline	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,4,5-Trichlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Chloronaphthalene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2-Nitroaniline	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,4-Dinitrobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Dimethylphthalate	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,3-Dinitrobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,6-Dinitrotoluene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,2-Dinitrobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Acenaphthylene	ND	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
3-Nitroaniline	ND	0.26	EPA 8270E	5-4-20	5-4-20	



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Star-Concrete-Pile						
Laboratory ID: 05-008-01						
2,4-Dinitrophenol	ND	4.4	EPA 8270E	5-4-20	5-4-20	
Acenaphthene	ND	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
4-Nitrophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,4-Dinitrotoluene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Dibenzofuran	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,3,5,6-Tetrachlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
2,3,4,6-Tetrachlorophenol	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Diethylphthalate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
4-Chlorophenyl-phenylether	ND	0.26	EPA 8270E	5-4-20	5-4-20	
4-Nitroaniline	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Fluorene	0.015	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
4,6-Dinitro-2-methylphenol	ND	2.7	EPA 8270E	5-4-20	5-4-20	
n-Nitrosodiphenylamine	ND	0.26	EPA 8270E	5-4-20	5-4-20	
1,2-Diphenylhydrazine	ND	0.26	EPA 8270E	5-4-20	5-4-20	
4-Bromophenyl-phenylether	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Hexachlorobenzene	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Pentachlorophenol	1.4	1.3	EPA 8270E	5-4-20	5-4-20	
Phenanthrene	0.17	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Anthracene	0.025	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Carbazole	ND	0.26	EPA 8270E	5-4-20	5-4-20	
Di-n-butylphthalate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
Fluoranthene	0.28	0.26	EPA 8270E	5-4-20	5-4-20	
Pyrene	0.29	0.26	EPA 8270E	5-4-20	5-4-20	
Butylbenzylphthalate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
bis-2-Ethylhexyladipate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
3,3'-Dichlorobenzidine	ND	1.3	EPA 8270E	5-4-20	5-4-20	
Benzo[a]anthracene	0.14	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Chrysene	0.16	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
bis(2-Ethylhexyl)phthalate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
Di-n-octylphthalate	ND	1.3	EPA 8270E	5-4-20	5-4-20	
Benzo[b]fluoranthene	0.14	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo(j,k)fluoranthene	0.066	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo[a]pyrene	0.11	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Indeno[1,2,3-cd]pyrene	0.080	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Dibenz[a,h]anthracene	0.015	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo[g,h,i]perylene	0.088	0.010	EPA 8270E/SIM	5-4-20	5-4-20	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	44	22 - 109				
Phenol-d6	56	36 - 110				
Nitrobenzene-d5	62	31 - 109				
2-Fluorobiphenyl	74	45 - 107				
2,4,6-Tribromophenol	55	43 - 124				
Terphenyl-d14	74	52 - 118				



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504S2					
n-Nitrosodimethylamine	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Pyridine	ND	0.33	EPA 8270E	5-4-20	5-4-20	
Phenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Aniline	ND	0.17	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Chlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,3-Dichlorobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,4-Dichlorobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Benzyl alcohol	ND	0.17	EPA 8270E	5-4-20	5-4-20	
1,2-Dichlorobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270E	5-4-20	5-4-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270E	5-4-20	5-4-20	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Hexachloroethane	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Nitrobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Isophorone	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Nitrophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,4-Dimethylphenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,4-Dichlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
4-Chloroaniline	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Hexachlorobutadiene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,3-Dichloroaniline	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Chloronaphthalene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2-Nitroaniline	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,4-Dinitrobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Dimethylphthalate	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,3-Dinitrobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,6-Dinitrotoluene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,2-Dinitrobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
3-Nitroaniline	ND	0.033	EPA 8270E	5-4-20	5-4-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504S2					
2,4-Dinitrophenol	ND	0.56	EPA 8270E	5-4-20	5-4-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
4-Nitrophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,4-Dinitrotoluene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Dibenzofuran	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Diethylphthalate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270E	5-4-20	5-4-20	
4-Nitroaniline	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
4,6-Dinitro-2-methylphenol	ND	0.35	EPA 8270E	5-4-20	5-4-20	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270E	5-4-20	5-4-20	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270E	5-4-20	5-4-20	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Hexachlorobenzene	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Pentachlorophenol	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Carbazole	ND	0.033	EPA 8270E	5-4-20	5-4-20	
Di-n-butylphthalate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Butylbenzylphthalate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Di-n-octylphthalate	ND	0.17	EPA 8270E	5-4-20	5-4-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-4-20	5-4-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	56	22 - 109				
Phenol-d6	64	36 - 110				
Nitrobenzene-d5	64	31 - 109				
2-Fluorobiphenyl	73	45 - 107				
2,4,6-Tribromophenol	86	43 - 124				
Terphenyl-d14	86	52 - 118				



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Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0504S2									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	0.952	0.951	1.33	1.33	72	72	47 - 104	0	30	
2-Chlorophenol	0.905	0.903	1.33	1.33	68	68	45 - 108	0	31	
1,4-Dichlorobenzene	0.428	0.423	0.667	0.667	64	63	41 - 105	1	32	
n-Nitroso-di-n-propylamine	0.454	0.455	0.667	0.667	68	68	47 - 103	0	28	
1,2,4-Trichlorobenzene	0.454	0.439	0.667	0.667	68	66	42 - 111	3	32	
4-Chloro-3-methylphenol	1.07	1.06	1.33	1.33	80	80	61 - 108	1	25	
Acenaphthene	0.506	0.499	0.667	0.667	76	75	54 - 102	1	23	
4-Nitrophenol	1.16	1.13	1.33	1.33	87	85	53 - 122	3	24	
2,4-Dinitrotoluene	0.527	0.515	0.667	0.667	79	77	57 - 107	2	22	
Pentachlorophenol	0.629	0.776	1.33	1.33	47	58	44 - 132	21	23	
Pyrene	0.546	0.536	0.667	0.667	82	80	58 - 111	2	21	
Surrogate:										
2-Fluorophenol					65	66	22 - 109			
Phenol-d6					71	71	36 - 110			
Nitrobenzene-d5					72	73	31 - 109			
2-Fluorobiphenyl					75	75	45 - 107			
2,4,6-Tribromophenol					87	84	43 - 124			
Terphenyl-d14					83	83	52 - 118			



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Star-Concrete-Pile						
Laboratory ID: 05-008-01						
Aroclor 1016	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1221	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1232	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1242	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1248	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1254	ND	0.052	EPA 8082A	5-4-20	5-5-20	
Aroclor 1260	ND	0.052	EPA 8082A	5-4-20	5-5-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	92	46-125				



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504S1					
Aroclor 1016	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-4-20	5-5-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	93	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	04-201-02									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.524	0.547	0.500	0.500	0.0600	93	97	43-125	4	15
Surrogate:										
DCB						87	89	46-125		



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Star-Concrete-Pile						
Laboratory ID: 05-008-01						
Arsenic	35	10	EPA 6010D	5-4-20	5-4-20	
Barium	110	2.6	EPA 6010D	5-4-20	5-4-20	
Cadmium	0.94	0.52	EPA 6010D	5-4-20	5-4-20	
Chromium	350	2.6	EPA 6010D	5-4-20	5-4-20	
Copper	270	1.0	EPA 6010D	5-4-20	5-4-20	
Lead	140	5.2	EPA 6010D	5-4-20	5-4-20	
Mercury	0.34	0.26	EPA 7471B	5-5-20	5-5-20	
Nickel	740	13	EPA 6010D	5-4-20	5-4-20	
Selenium	ND	10	EPA 6010D	5-4-20	5-4-20	
Silver	ND	1.0	EPA 6010D	5-4-20	5-4-20	
Zinc	210	2.6	EPA 6010D	5-4-20	5-4-20	



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504SM1					
Arsenic	ND	10	EPA 6010D	5-4-20	5-4-20	
Barium	ND	2.5	EPA 6010D	5-4-20	5-4-20	
Cadmium	ND	0.50	EPA 6010D	5-4-20	5-4-20	
Chromium	ND	0.50	EPA 6010D	5-4-20	5-4-20	
Copper	ND	1.0	EPA 6010D	5-4-20	5-4-20	
Lead	ND	5.0	EPA 6010D	5-4-20	5-4-20	
Nickel	ND	2.5	EPA 6010D	5-4-20	5-4-20	
Selenium	ND	10	EPA 6010D	5-4-20	5-4-20	
Silver	ND	1.0	EPA 6010D	5-4-20	5-4-20	
Zinc	ND	2.5	EPA 6010D	5-4-20	5-4-20	
Laboratory ID:	MB0505S1					
Mercury	ND	0.25	EPA 7471B	5-5-20	5-5-20	



Date of Report: May 6, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-203-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	24.5	26.2	NA	NA	NA	7	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	11.3	12.7	NA	NA	NA	12	20	
Copper	18.7	16.2	NA	NA	NA	14	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Nickel	12.3	14.4	NA	NA	NA	16	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	20.6	20.5	NA	NA	NA	0	20	

Laboratory ID:	05-008-01							
Mercury	0.318	0.379	NA	NA	NA	18	20	

MATRIX SPIKES

Laboratory ID:	04-203-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	90.4	92.9	100	100	ND	90	93	75-125	3	20
Barium	121	121	100	100	24.5	97	96	75-125	0	20
Cadmium	45.7	45.6	50.0	50.0	ND	91	91	75-125	0	20
Chromium	107	103	100	100	11.3	95	92	75-125	3	20
Copper	66.4	66.0	50.0	50.0	18.7	95	95	75-125	1	20
Lead	224	225	250	250	ND	90	90	75-125	0	20
Nickel	107	106	100	100	12.3	95	93	75-125	1	20
Selenium	88.0	87.3	100	100	ND	88	87	75-125	1	20
Silver	21.5	21.9	25.0	25.0	ND	86	87	75-125	2	20
Zinc	115	115	100	100	20.6	95	94	75-125	0	20

Laboratory ID:	05-008-01									
Mercury	0.915	0.771	0.500	0.500	0.318	119	91	80-120	17	20



Date of Report: May 6, 2020
Samples Submitted: May 1, 2020
Laboratory Reference: 2005-008
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
Star-Concrete-Pile	05-008-01	5	5-4-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Page 1 of 1

Company: DH Environmental

Project Number: _____

Project Name: Star Forge

Project Manager: Stacy Fox

Sampled by: Stacy Fox

Turnaround Request (in working days)	
(Check One)	
☐ Same Day	☐ 1 Day
☒ 2 Days	☐ 3 Days
☐ Standard (7 Days)	
☐ _____	
(other)	

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number
1	Star-Concrete-Pile	5-1-20	1030	S	6
2	Star-Heat-Treat-Floor	5-1-20	1045	S	6
3	Star-Heat-Treat-Floor-E	5-1-20	1100	S	6
4	Star-Forge-Floor-Area	5-1-20	1115	S	6
5	Star-Forge-South-Wall	5-1-20	1130	S	6
6	Star-Mill-Slag-Area	5-1-20	1200	S	6

Laboratory Number:					
	NWTPH-HCID				
	NWTPH-Gx/BTEX				
	NWTPH-Gx				
	NWTPH-Dx (☐ Acid / SG Clean-up)				
	Volatiles 8260C	X	X	X	(X)
	Halogenated Volatiles 8260C				
	EDB EPA 8011 (Waters Only)				
	Semivolatiles 8270D/SIM (with low-level PAHs)	X	X	X	(X)
	PAHs 8270D/SIM (low-level)	X	X	X	(X)
	PCBs 8082A	X	X	X	(X)
	Organochlorine Pesticides 8081B				
	Organophosphorus Pesticides 8270D/SIM				
	Chlorinated Acid Herbicides 8151A				
	Total RCRA Metals + Cu, N, Zn	X	X	X	(X)
	Total MTCA Metals	X	X	X	(X)
	TCLP Metals CATTERED (HOLD)	X	X	X	X
	HEM (oil and grease) 1664A				
	Fish Bio Assays (HOLD)	X	X	X	X
	HOLD	X	X	X	X
	% Moisture	(X)			

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	DH Environmental	5-1-22	2:45pm	Please send results to: data@dhenviro.com + stacyfox@dhenviro.com (X) Added 5/4/2020. DB (2-day TAT)
Received	Spay	5-1-20	2:50	
Relinquished	Spay	5-1-20	15:20	
Received	QSE	5/1/20	1520	
Relinquished				
Received				Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date	Reviewed/Date	Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 8, 2020

Stacy Fox
DH Environmental, Inc.
1011 SW Klickitat Way, Suite C-107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-008B

Dear Stacy:

Enclosed are the analytical results and associated quality control data for samples submitted on May 1, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 8, 2020
Samples Submitted: May 1, 2020
Laboratory Reference: 2005-008B
Project: Star Forge

Case Narrative

Samples were collected on May 1, 2020 and received by the laboratory on May 1, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: May 8, 2020
Samples Submitted: May 1, 2020
Laboratory Reference: 2005-008B
Project: Star Forge

TCLP METALS
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Star-Concrete-Pile					
Laboratory ID:	05-008-01					
Chromium	0.023	0.020	EPA 6010D	5-8-20	5-8-20	
Lead	ND	0.20	EPA 6010D	5-8-20	5-8-20	



Date of Report: May 8, 2020
 Samples Submitted: May 1, 2020
 Laboratory Reference: 2005-008B
 Project: Star Forge

**TCLP METALS
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0508TM1					
Chromium	ND	0.020	EPA 6010D	5-8-20	5-8-20	
Lead	ND	0.20	EPA 6010D	5-8-20	5-8-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-008-01							
	ORIG	DUP						
Chromium	0.0226	0.0210	NA	NA	NA	7	20	
Lead	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	05-008-01									
	MS	MSD	MS	MSD		MS	MSD			
Chromium	3.55	3.56	4.00	4.00	0.0226	88	89	75-125	0	20
Lead	8.50	8.65	10.0	10.0	ND	85	87	75-125	2	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

24

Company: DH Environmental
Product Number: _____

Project Manager: Star Forge

Sampled by:

Stacy Fox

Sample Identification

Star-Concrete-Pile

2 Star-Heat-Treat-Floor

3	Star-Heat-Treat-Floor-E	5-1-20	1100	S
---	-------------------------	--------	------	---

4	Star-Forge-Flair-Area
---	-----------------------

Star-Forge-South-Wall	5
-----------------------	---

6	Star-Mill-Slag-Area
---	---------------------

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days☐ Standard (7 Days)

☐ _____ (other)

Date	Time	Matrix
Sampled	Sampled	

Number of Containers

05-008

11/12

120

% Moisture	100
------------	-----

Company

Date _____

Time

Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Dolinaurichod

1

[illegible]



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 18, 2020

Stacy Fox
DH Environmental, Inc.
1011 SW Klickitat Way, Suite C-107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2005-008C

Dear Stacy:

Enclosed are the analytical results and associated quality control data for samples submitted on May 1, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID: Star-Concrete-Pile

Report date: May 18, 2020

Submitted to:

OnSite Environmental
14648 NE 95th Street
Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on one sample submitted by OnSite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The sample Star-Concrete-Pile, was received in the laboratory on May 12, 2020. Upon arrival at the laboratory the sample was inspected and contents verified against information provided on the chain-of-custody form. The sample was stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number	2005-024
Sample ID	Star-Concrete-Pile
Test initiation date; time	5/14/2020; 0915h
Test termination date; time	5/18/2020; 1010h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The sample was tested using fish received on March 25, 2020.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	80 days post swim-up (hatch date 2/3/2020)
Mean weight	0.44 g
Mean length	44 mm
Ratio of longest to shortest	1.2
Loading	0.73 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on sample Star-Concrete-Pile is contained in Table 3. There was no mortality during the test. Based on these results, the sample does not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
Star-Concrete-Pile	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated May 1, 2020. The LC₅₀ of 132 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 30.6 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised December 2016.
- WDOE. 2009. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised June 2009.

Appendix A
***Oncorhynchus mykiss* Dangerous Waste Toxicity Test**
Raw Bench Sheets

Dangerous Waste Toxicity Test

Start Date & Time: 5/14/2020 0915

Start Date & Time:	5/18/2020	10:10
End Date & Time:		

Test Organism: *Oncorhynchus mykiss*

Test Protocol: **Washington State Department of Ecology**

Test Organism: Oncorhynchus mykiss

Test Protocol: Washington State Department of Ecology Pub. 80-12

[illegible]

Technician Initials

Sample	Alk. (init.)	Hard. (init.)	(mg/L as CaCO ₃)		Chlorine (mg/L Cl ₂)
			Alk. (fin.)	Hard. (fin.)	
Control	64	80	64	80	40.03
100ppm	60	80	64	80	

Animal Source:
Date Received:

Trout Lodge
3/25/2020

Test Volume:
Date of Hatch:
Date of Swim up:

2/24	2020
2/3	2020

Weights (g):	245	273	271	240
Lengths (mm):	444	471	473	472
Length max/min:	489/401	500/400	490/400	480/400

loading: 0.732

$\mu = \frac{544}{44}$	Rainier Environmental
$\mu = \frac{444}{44}$	Washington Laboratory

Dilution Water Source: MTSW 036

QA Check ~~37~~

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

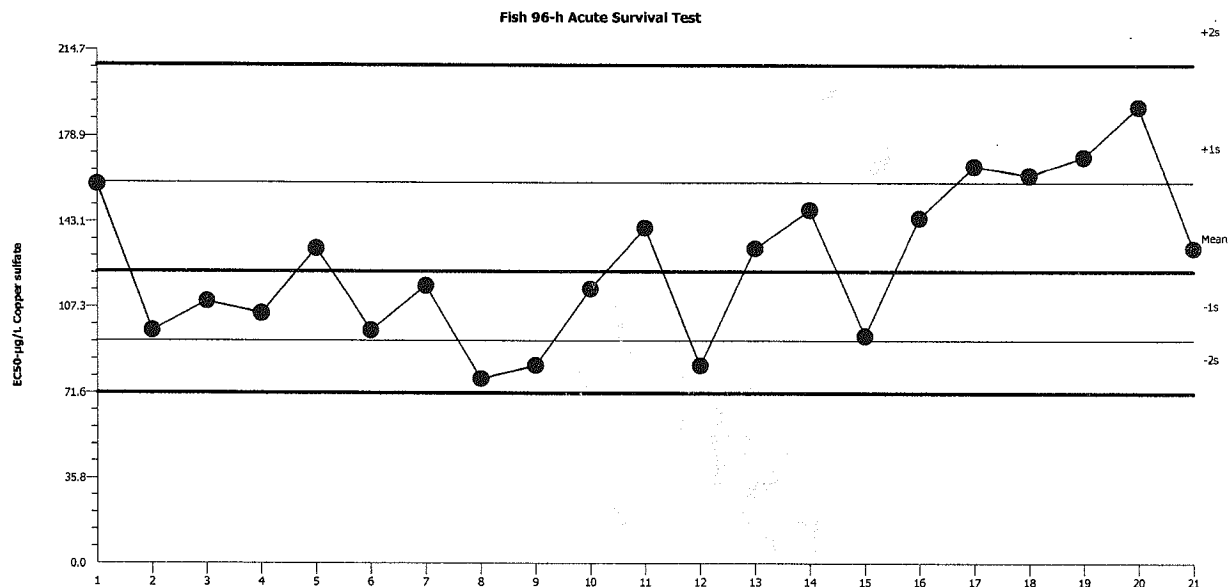
Organism: Oncorhynchus mykiss (Rainbow Tro

Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF



Mean: 122.1

Count: 20

-1s Warning Limit: 93.48

-2s Action Limit: 71.56

Sigma: NA

CV: 30.60%

+1s Warning Limit: 159.5

+2s Action Limit: 208.4

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2018	Jul	25	158.7	36.62	0.9815			03-7661-5860	05-4916-3169
2		Aug	30	97.72	-24.4	-0.8343			01-6631-0399	00-2872-0274
3		Oct	5	109.7	-12.44	-0.402			09-8718-1650	14-5303-2875
4		Nov	6	104.7	-17.39	-0.5749			20-5282-8357	01-3690-0719
5		Dec	5	132	9.831	0.2898			01-4499-1094	07-5652-1457
6	2019	Jan	7	97.72	-24.4	-0.8343			03-9395-5944	09-6087-0434
7		Feb	9	116.1	-5.976	-0.1878			13-6349-4914	05-5573-8325
8		Mar	12	77.56	-44.56	-1.699	(-)		03-9582-1391	08-0363-8342
9		Apr	19	83.12	-39	-1.44	(-)		16-0727-4914	09-8538-6220
10		May	21	114.9	-7.25	-0.229			13-0213-5670	12-8044-7071
11		Jun	21	140.6	18.52	0.5284			18-7198-9789	02-0902-1290
12		Jul	23	83.12	-39	-1.44	(-)		09-5504-5129	09-5466-8341
13		Aug	23	132	9.831	0.2898			06-2129-4986	03-1480-8200
14		Sep	20	148.1	25.99	0.7221			14-9775-6582	02-8526-9159
15		Oct	22	95.48	-26.64	-0.9208			08-2604-9852	04-5996-4554
16		Nov	25	144.7	22.61	0.6357			19-0900-7567	17-7816-6246
17		Dec	26	166.2	44.13	1.154	(+)		18-0718-4325	01-1522-2292
18	2020	Jan	27	162.5	40.33	1.068	(+)		15-7428-0290	09-7189-2054
19		Feb	28	170.1	48.01	1.241	(+)		09-4267-7927	12-7910-1452
20		Apr	1	191	68.85	1.673	(+)		13-6543-5000	21-3363-8866
21		May	1	132	9.831	0.2898			05-3085-5611	09-0915-7454

CETIS Summary Report

Report Date: 11 May-20 10:27 (p 1 of 1)
Test Code: RA050120OM | 05-3085-5611

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	08-0515-7494	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	01 May-20 13:45	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	05 May-20 14:00	Species:	Oncorhynchus mykiss	Brine:	
Duration:	4d 0h	Source:	Trout Lodge Fish Farm	Age:	67d
Sample ID:	09-9864-7938	Code:	RA050120OM	Client:	Internal Lab
Sample Date:	01 May-20	Material:	Copper sulfate	Project:	
Receive Date:	01 May-20	Source:	Reference Toxicant		
Sample Age:	14h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-0961-1207	96h Survival Rate	50	100	70.71	22.0%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
09-0915-7454	96h Survival Rate	LC50	132	111.6	156		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	0.9333	0.8902	0.9765	0.8	1	0.06667	0.1155	12.37%	6.67%
100		3	0.7333	0.7118	0.7549	0.7	0.8	0.03333	0.05774	7.87%	26.67%
200		3	0.2333	0.1394	0.3273	0	0.5	0.1453	0.2517	107.9%	76.67%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	0.8	1
100		0.7	0.7	0.8
200		0.2	0.5	0
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	8/10	10/10
100		7/10	7/10	8/10
200		2/10	5/10	0/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



PSH

Laboratory Reference #: 05-008

Laboratory: Rainier Environmental

Turnaround Request

Project Manager: David Baumeister

1 Day 2 Day 3 Day

email: dbaumeister@onsite-env.com

Project Number: Star Forge

Other: Week

Project Name:

[illegible]



**Onsite
Environmental Inc.**

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: Onsite Environmental		Turnaround Request (in working days)		Laboratory Number: 05-008											
Project Number:		(Check One)													
Project Name: Star Forge		☐ Same Day ☐ 1 Day													
Project Manager: Stacy Fox		☒ 2 Days ☐ 3 Days													
Sampled by: Stacy Fox		☐ Standard (7 Days)													
Sampled by: Stacy Fox		☐ (other)													
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers										
1	Star - Concrete-Pile	5-1-20	1030	S	6										
2	Star - Heat-Treat-Floor	5-1-20	1045	S	6										
3	Star - Heat-Treat-Floor-E	5-1-20	1100	S	6										
4	Star-Forge-Floor-Area	5-1-20	1115	S	6										
5	Star-Forge-South-Wall	5-1-20	1130	S	6										
6	Star-Mill-Slag-Area	5-1-20	1200	S	6										
					NWTPH-HCID										
					NWTPH-Gx/BTEX										
					NWTPH-Gx										
					NWTPH-Dx (☐ Acid / SG Clean-up)										
					☒ Volatiles 8260C										
					Halogenated Volatiles 8260C										
					EDB EPA 8011 (Waters Only)										
					☒ Semivolatiles 8270D/SIM (with low-level PAHs)										
					PAHs 8270D/SIM (low-level)										
					☒ PCBs 8082A										
					Organochlorine Pesticides 8081B										
					Organophosphorus Pesticides 8270D/SIM										
					Chlorinated Acid Herbicides 8151A										
					☒ Total RCRA Metals + Cu, N, Zn										
					Total MTCA Metals										
					☒ TCLP Metals										
					HEM (oil and grease) 1664A										
					☒ Fish Bio										
					☒ HOLD										
					TCLP Cr + Pb										
					☒ % Moisture										
Signature		Company		Date	Time	Comments/Special Instructions									
[Signature]		Onsite Environmental		5-1-20	2:45pm	Please send results to: data@onsite-env.com									
Received		[Signature]		5-1-20	2:50	Stacy Fox & Onsite Environmental									
Relinquished		[Signature]		5-1-20	15:20	Added 5/14/2020. DB (2 day TAT)									
Received		[Signature]		5/1/20	1520	Added 5/6/2020 5:00pm. (1 day TAT)									
Relinquished		[Signature]				Added 5/11/20 VL (week lat)									
Received		[Signature]				Data Package: Standard ☐ Level III ☐ Level IV ☐									
Reviewed/Date		Reviewed/Date		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐											

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 6, 2020

Corey League, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr League:

Included are the results from the testing of material submitted on March 27, 2020 from the SOU_0995-002_ 2020, F&BI 003445 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Mindy Graddon
SOU0406R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 27, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0995-002_ 2020, F&BI 003445 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
003445 -01	SP02-01-20200327
003445 -02	SP02-02-20200327
003445 -03	SP02-03-20200327
003445 -04	SP02-04-20200327
003445 -05	SP02-05-20200327

A 6020B internal standard failed the acceptance criteria for several samples. The sample was diluted and reanalyzed with acceptable results. Both data sets were reported.

Selenium in the 6020B matrix spike and matrix spike duplicate failed the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-01-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-01
Date Analyzed:	04/01/20	Data File:	003445-01.069
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	20.1
Barium	82.2
Cadmium	2.14
Chromium	2,670 ve J
Copper	277 J
Lead	97.7
Mercury	<1
Nickel	959 J
Selenium	3.12
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-01-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-01 x5
Date Analyzed:	04/02/20	Data File:	003445-01 x5.052
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	3,330
Copper	375
Nickel	1,240
Zinc	265

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-02-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-02
Date Analyzed:	04/01/20	Data File:	003445-02.072
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	29.8
Barium	72.9
Cadmium	<1
Chromium	1,810 ve
Copper	212
Lead	208 ve
Mercury	<1
Nickel	706
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-02-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-02 x5
Date Analyzed:	04/02/20	Data File:	003445-02 x5.055
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	2,140
Lead	240
Zinc	275

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-03-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-03
Date Analyzed:	04/01/20	Data File:	003445-03.075
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	32.6
Barium	93.9
Cadmium	2.93
Chromium	1,020 ve J
Copper	343 J
Lead	208 ve
Mercury	<1
Nickel	872 J
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-03-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 2020
Date Extracted:	04/01/20	Lab ID:	003445-03 x5
Date Analyzed:	04/02/20	Data File:	003445-03 x5.058
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	1,260
Copper	444
Nickel	1,100
Zinc	323

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-04-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-04
Date Analyzed:	04/01/20	Data File:	003445-04.076
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	37.1
Barium	104
Cadmium	1.50
Chromium	2,060 ve J
Copper	269 J
Lead	251 ve
Mercury	<1
Nickel	845 J
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-04-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-04 x5
Date Analyzed:	04/02/20	Data File:	003445-04 x5.059
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	2,600
Copper	375
Lead	297
Nickel	1,130
Zinc	384

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-05-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-05
Date Analyzed:	04/01/20	Data File:	003445-05.077
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	26.1
Barium	85.5
Cadmium	1.08
Chromium	523 ve J
Copper	252 J
Lead	105
Mercury	<1
Nickel	718 J
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	SP02-05-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	003445-05 x5
Date Analyzed:	04/02/20	Data File:	003445-05 x5.060
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	637
Copper	332
Nickel	915
Zinc	197

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0995-002_2020
Date Extracted:	04/01/20	Lab ID:	I0-197 mb
Date Analyzed:	04/02/20	Data File:	I0-197 mb.050
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Copper	<5
Lead	<1
Mercury	<1
Nickel	<1
Selenium	<1
Silver	<1
Zinc	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/06/20

Date Received: 03/27/20

Project: SOU_0995-002_ 2020, F&BI 003445

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 003445-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	19.0	94	105	75-125	11
Barium	mg/kg (ppm)	50	71.7	98	87	75-125	12
Cadmium	mg/kg (ppm)	10	<5	95	95	75-125	0
Chromium	mg/kg (ppm)	50	3,160	0 b	341 b	75-125	200 b
Copper	mg/kg (ppm)	50	356	844 b	86 b	75-125	163 b
Lead	mg/kg (ppm)	50	103	118 b	76 b	75-125	43 b
Mercury	mg/kg (ppm)	5	<5	93	94	75-125	1
Nickel	mg/kg (ppm)	25	1,180	0 b	0 b	75-125	0 b
Selenium	mg/kg (ppm)	5	<5	72 vo	126 vo	75-125	55 vo
Silver	mg/kg (ppm)	10	<5	87	94	75-125	8
Zinc	mg/kg (ppm)	50	252	216 b	86 b	75-125	86 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	84	80-120
Barium	mg/kg (ppm)	50	97	80-120
Cadmium	mg/kg (ppm)	10	101	80-120
Chromium	mg/kg (ppm)	50	97	80-120
Copper	mg/kg (ppm)	50	102	80-120
Lead	mg/kg (ppm)	50	101	80-120
Mercury	mg/kg (ppm)	5	104	80-120
Nickel	mg/kg (ppm)	25	102	80-120
Selenium	mg/kg (ppm)	5	100	80-120
Silver	mg/kg (ppm)	10	101	80-120
Zinc	mg/kg (ppm)	50	96	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

ME 03-27-20

003445-

Company **SoundEarth Strategies, Inc.**

Address 2811 Fairview Avenue E. Suite 2000

City State ZIP
Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

TURNAROUND TIME
 × Standard (2 Weeks)
 RUSH
 Rush charges authorized by: _____

 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes		
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270		RCRA 8 and copper, zinc, and nickel	
SP02-C1-20200327	SP02	—	01	3/27/20	1245	SCIL	1								
SP02-C2-20200327	↓	—	02	↓	1250	↓	↓								
SP02-C3-20200327	↓	—	03	↓	1253	↓	↓								
SP02-C4-20200327	↓	—	04	↓	1255	↓	↓								
SP02-C5-20200327	↓	—	05	↓	1300	↓	↓								
CPM 3/27/20															

Friedman & Brown Inc

3012 16th Avenue West

Seattle WA 98179-2029

DL 6006 005 0000

F
0696
2044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Glenn McHenry	SES	3/27/20	1345
	James Brady	FEB	3/27	1345
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Samples received at 30°C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 13, 2020

Corey League, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr League:

Included are the additional results from the testing of material submitted on March 27, 2020 from the SOU_0995-002_ 20200327, F&BI 003445 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Mindy Graddon
SOU0413R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 27, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0995-002_ 20200327, F&BI 003445 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
003445 -01	SP02-01-20200327
003445 -02	SP02-02-20200327
003445 -03	SP02-03-20200327
003445 -04	SP02-04-20200327
003445 -05	SP02-05-20200327

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	SP02-01-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	003445-01
Date Analyzed:	04/09/20	Data File:	003445-01.042
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	SP02-02-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	003445-02
Date Analyzed:	04/09/20	Data File:	003445-02.045
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	SP02-03-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	003445-03
Date Analyzed:	04/09/20	Data File:	003445-03.046
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	SP02-04-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	003445-04
Date Analyzed:	04/09/20	Data File:	003445-04.047
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	SP02-05-20200327	Client:	SoundEarth Strategies
Date Received:	03/27/20	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	003445-05
Date Analyzed:	04/09/20	Data File:	003445-05.048
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0995-002_ 20200327
Date Extracted:	04/08/20	Lab ID:	I0-211 mb
Date Analyzed:	04/09/20	Data File:	I0-211 mb.040
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/13/20

Date Received: 03/27/20

Project: SOU_0995-002_ 20200327, F&BI 003445

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/SOLID SAMPLES
FOR TCLP METALS USING
EPA METHODS 6020B AND 1311**

Laboratory Code: 003445-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/L (ppm)	2.0	<1	100	96	75-125	4
Lead	mg/L (ppm)	1.0	<1	87	84	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	96	80-120
Lead	mg/L (ppm)	1.0	90	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

003445

SAMPLE CHAIN OF CUSTODY

ME 03-27-20

BT 1

Send Report to Corey League, Windy Cadden

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (Signature) [Signature]

PROJECT NAME/NO. Uossusm Fage

PO # 0995-002

Page # 1 of 1

TURNAROUND TIME
X Standard (2 Weeks)
RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days
Return samples
Will call with instructions

REMARKS

Standard TAT (5-day)

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					TCLP Cr	TCLP Pb	Notes
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270			
SP02-01-20200327	SP02	—	01	3/27/20	1245	Scil	1						X		✓
SP02-02-20200327		—	02		1250								X		✓
SP02-03-20200327		—	03		1253								X		✓
SP02-04-20200327		—	04		1255								X		✓
SP02-05-20200327		—	05		1300								X		✓
<u>SP02-06-20200327</u>															
<u>SP02-07-20200327</u>															
<u>SP02-08-20200327</u>															
<u>SP02-09-20200327</u>															
<u>SP02-10-20200327</u>															
<u>SP02-11-20200327</u>															
<u>SP02-12-20200327</u>															
<u>SP02-13-20200327</u>															
<u>SP02-14-20200327</u>															
<u>SP02-15-20200327</u>															
<u>SP02-16-20200327</u>															
<u>SP02-17-20200327</u>															
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<u>SP02-19-20200327</u>															
<u>SP02-20-20200327</u>															
<u>SP02-21-20200327</u>															
<u>SP02-22-20200327</u>															
<u>SP02-23-20200327</u>															
<u>SP02-24-20200327</u>															
<u>SP02-25-20200327</u>															
<u>SP02-26-20200327</u>															
<u>SP02-27-20200327</u>															
<u>SP02-28-20200327</u>															
<u>SP02-29-20200327</u>															
<u>SP02-30-20200327</u>															

Friedman & Bryna, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COG\COG.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	<u>Glenn McQuay</u>	<u>SES</u>	<u>3/27/20</u>	<u>1345</u>
<u>[Signature]</u>	<u>James Brady</u>	<u>F&B</u>	<u>3/27</u>	<u>1245</u>
Received by:				

Samples received at 3 00

Table 1
UST Waste Designation Summary Table
Former Jorgenson Forge Property
Tukwila, Washington

Tank ID	Contents	Designation Status	Comments
UST-15	empty	NA	
UST-16	empty	NA	
UST-17	empty	NA	
UST-18	empty	NA	
UST-19	empty	NA	
UST-20	empty	NA	
UST-21	red dyed diesel fuel	exempt, fuels recycling	
UST-22	empty	NA	
UST-26	sand	non-hazardous	Sand may remain in place during change in service
UST-27	oily water	non-hazardous	
UST-28	sand	non-hazardous	Sand may remain in place during change in service
UST-29	oily water	non-hazardous	
UST-30	oily water	non-hazardous	
UST-31	sand	non-hazardous	Sand may remain in place during change in service
UST-32	oily water	non-hazardous	
UST-33	oily water	non-hazardous	
UST-34	oily water	non-hazardous	
UST-35	empty	NA	
N. Tanks Slag		non-hazardous	Slag material overlying the USTs in the N. Tank Farm
S. Tanks Slag		non-hazardous	Slag material overlying the USTs in the S. Tank Farm

Notes:

UST sampling conducted April 21 & 22, 2020

See waste designation packages for analytical details and laboratory analytical reports



DANGEROUS WASTE DESIGNATION FORM – Product (diesel)

Star Forge, Former Jorgenson Forge Property, UST-21

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Product (diesel fuel)

Generation Process: Pump out of UST-21

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer	pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]
	Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ N/A ☒ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals
			☐ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L
☐ Ignitable [D001]	☒ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic: -- ☐ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium: -- ☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium: -- ☐ ND
☐ Toxic [D004 – D043]	☐ ≥ 2 ppm and < 50 ppm	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium: -- ☐ ND
List Here:	[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Lead ≥ 5.0 mg/L [D008]	Lead: -- ☐ ND
	☐ ≥ 50 ppm [TSCA Regulated]	☐ Mercury ≥ 0.2 mg/L [D009]	Mercury: -- ☐ ND
	☐ < 1 ppm	☐ Selenium ≥ 1.0 mg/L [D010]	Selenium: -- ☐ ND
	Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Silver ≥ 5.0 mg/L [D011]	Silver: -- ☐ ND
		Check if: ☐ Assumed	Copper: -- ☐ ND
		☐ TCLP Conducted	Nickel: -- ☐ ND
		☒ TCLP Not Conducted	Zinc: -- ☐ ND
		Comments:	Comments:

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Liquid	95-100
Misc. solids	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☒ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

This material is being managed as a product/fuel for its originally intended purpose and therefore is not solid waste and not subject to WAC 173-303.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-21']; Friedman & Bruya Lab Report 910502 [Sample ID 'UST-21-20191024']; Fremont Analytical Lab Report 910502 [sample ID 'UST-21-20191024'])
☐ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Diesel Fuel

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Product (Diesel)
Applicable Sample IDs: 'UST-21' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg CAS	Concentration*	Toxicity ^{Source}	Toxic Category	Concentration (mass %)				
						X	A	B	C	D
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	--	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ^a	B						
Barium	7440-39-3	--	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ^a	NOT APPLICABLE						
Cadmium	7440-43-9	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ^a	X						
Chromium	7440-47-3	--	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ^a	C						
Copper	7440-50-8	--	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ^a	A						
Lead	7439-92-1	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ^a	C						
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ^a	C						
Mercury	7439-97-6	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ^a	A						
Nickel	7440-02-0	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ^a	D						
Selenium	7782-49-2	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ^a	D						
Silver	7440-22-4	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ^a	X						
Zinc	7440-66-6	--	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ^a	B						
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ^a	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ^a	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ^a	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ^a	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ^a	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ^a	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ^a	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ^a	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ^a	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ^a	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ^a	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ^a	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ^a	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ^a	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ^a	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ^a	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Product (Diesel)
Applicable Sample IDs: 'UST-21' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	23	LD50 Oral Rat 5000 mg/kg ²	D					2.30E-03
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	110	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ³	C				1.10E-02	
sec-Butylbenzene	135-98-8	17	2240 mg/kg Oral Rat LD50 ²	D					1.70E-03
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	30	LD50 Rat oral 4750 mg/kg ²	D					3.00E-03
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	110	LD50 Mouse sc 1994.5 mg/kg ²	D					1.10E-02
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	500	LD50 Oral Rat 490 mg/kg ²	C				5.00E-02	
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Product (Diesel)
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000000	0.0000000	0.0610000	0.0180

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	0.00E+00	0.00E+00	6.10E-02	1.80E-02		
	0.00E+00	0.00E+00	0.00E+00	6.10E-05	1.80E-06	0.0000628	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-34

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Oily Water

Generation Process: Pump out of UST-34

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	Total Metals ☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table border="1"><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>68</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>17</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>260</td><td>☒ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td>7.2</td><td>☐ ND</td></tr><tr><td>Nickel:</td><td>89</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>1200</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:	68	☐ ND	Cadmium:		☒ ND	Chromium:	17	☐ ND	Lead:	260	☒ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	7.2	☐ ND	Nickel:	89	☐ ND	Zinc:	1200	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	68	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	17	☐ ND																																					
Lead:	260	☒ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	7.2	☐ ND																																					
Nickel:	89	☐ ND																																					
Zinc:	1200	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Liquid	95-100
Misc. solids	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-34']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-27-20191024*']) *note sample UST-27 from the F&B report was misidentified and should have been noted as UST-34 per letter dated Mar. 2, 2020 from Marten Law to Ecology.
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:

☐ TSCA Regulated Waste
TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, liquid

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-34' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	Concentration (mass %)					
Analyte		CAS	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	68	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	17	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.70E-06	
Copper	7440-50-8	7.2	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ³	A		7.20E-07			
Lead	7439-92-1	260	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.60E-05	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	89	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					8.90E-06
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X					
Zinc	7440-66-6	1200	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.20E-04		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/L/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/L/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ¹	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-34' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-34' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr	C					
Benzo(a)anthracene	56-55-3	0.018	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C				1.80E-09	
Chrysene	218-01-9	0.067	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C				6.70E-09	
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	0.016	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C				1.60E-09	
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000007	0.0001200	0.0000277	0.0000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	7.20E-07	1.20E-04	2.77E-05	8.90E-06		
	0.00E+00	7.20E-08	1.20E-06	2.77E-08	8.90E-10	0.0000013	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Sand

Star Forge, Former Jorgenson Forge Property, UST-26-Sand

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: soil

Generation Process: clean out of UST-26

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 75 cubic yards (15,000 gal.)

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State:

- ☒ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☐ Liquid (If liquid, indicate if the liquid is:
☒ Single Layer
☐ Multi-layer

pH:

- ☐ < 2 [D002]
☐ > 2 but < 12.5
☒ N/A ☐ > 12.5 [D002]

Flashpoint:

- ☒ N/A ☐ < 140 °F [D001]
☐ > 140 °F but < 200 °F
☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals
			☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L
☐ Ignitable [D001]	☒ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic: ☐ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium: 43 ☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium: ☒ ND
☐ Toxic [D004 – D043]	☐ ≥ 2 ppm and < 50 ppm	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium: 11 ☐ ND
List Here:	[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Lead ≥ 5.0 mg/L [D008]	Lead: ☒ ND
	☐ ≥ 50 ppm [TSCA Regulated]	☐ Mercury ≥ 0.2 mg/L [D009]	Mercury: ☒ ND
	☐ < 1 ppm	☐ Selenium ≥ 1.0 mg/L [D010]	Selenium: ☒ ND
	Note:	☐ Silver ≥ 5.0 mg/L [D011]	Silver: ☒ ND
	IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	Check if: ☐ Assumed	Copper: 11 ☐ ND
		☐ TCLP Conducted	Nickel: 15 ☐ ND
		☒ TCLP Not Conducted	Zinc: 21 ☐ ND
		Comments:	Comments:

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Soil	95-100
Misc. debris	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-26-sand'])
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:

☐ TSCA Regulated Waste
TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, soil

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Soil
Applicable Sample IDs: 'UST-26-sand' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg	Conversion Factor	1 mg/kg = 10^-4 %						
	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D	
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	43	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	11	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.10E-03		
Copper	7440-50-8	11	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.10E-03				
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C						
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	15	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.50E-03	
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X						
Zinc	7440-66-6	21	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.10E-03			
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0011000	0.0021000	0.0011000	0.0015

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.10E-03	2.10E-03	1.10E-03	1.50E-03		
	0.00E+00	1.10E-04	2.10E-05	1.10E-06	1.50E-07	0.0001323	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-27

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: oily water

Generation Process: clean out of UST-27

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	Total Metals □mg/kg □ug/kg □mg/L ☒ug/L <table border="1"><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>60</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>17</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>280</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td>79</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>240</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:	60	☐ ND	Cadmium:		☒ ND	Chromium:	17	☐ ND	Lead:	280	☐ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:		☒ ND	Nickel:	79	☐ ND	Zinc:	240	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	60	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	17	☐ ND																																					
Lead:	280	☐ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:		☒ ND																																					
Nickel:	79	☐ ND																																					
Zinc:	240	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
liquid	95-100
Misc. solids	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-27']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-34-20191024*']) *note sample UST-34 from the F&B report was misidentified and should have been noted as UST-27 per letter dated Mar. 2, 2020 from Marten Law to Ecology
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, oily water

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-27' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	Concentration (mass %)						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D	
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	60	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	17	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.70E-06		
Copper	7440-50-8	ND	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A						
Lead	7439-92-1	280	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.80E-05		
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	79	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.90E-06	
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X						
Zinc	7440-66-6	240	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.40E-05			
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-27' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-27' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	0.045	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.50E-09	
Chrysene	218-01-9	0.19	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C				1.90E-08	
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	0.119	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.19E-08	
Benzo(a)pyrene	50-32-8	0.043	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.30E-09	
Indeno(1,2,3-cd)pyrene	193-39-5	0.042	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.20E-09	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.041	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.10E-09	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000000	0.0000240	0.0000297	0.0000

Enter Category Mass % Here					EC	Designation
$\Sigma X\% / 1$	$\Sigma A\% / 10$	$\Sigma B\% / 100$	$\Sigma C\% / 1000$	$\Sigma D\% / 10000$		
0.00E+00	0.00E+00	2.40E-05	2.97E-05	7.90E-06		
0.00E+00	0.00E+00	2.40E-07	2.97E-08	7.90E-10	0.0000003	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Sand

Star Forge, Former Jorgenson Forge Property, UST-28-Sand

A. WASTE STREAM NAME AND GENERATION INFORMATION																																							
Waste Stream Name: <u>soil</u>																																							
Generation Process: <u>clean out of UST-28</u>																																							
RCRA ID Number that waste will be managed under:		Total Quantity and/or Estimated Generation rate:																																					
Star Forge LLC, DBA Jorgenson Forge: <u>WAD000602813</u>		Approximately 75 cubic yards (15,000 gal.)																																					
Other Descriptions (i.e. Shop, Project, Etc.):																																							
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																							
Physical State:		pH:																																					
☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint:																																					
		☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																					
Characteristic	PCB Content	TCLP Metals	Total Metals																																				
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected ☐ [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Arsenic:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Barium:</td> <td style="text-align: center;">74</td> <td>☐ ND</td> </tr> <tr> <td>Cadmium:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Chromium:</td> <td style="text-align: center;">14</td> <td>☐ ND</td> </tr> <tr> <td>Lead:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Mercury:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Selenium:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Silver:</td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Copper:</td> <td style="text-align: center;">21</td> <td>☐ ND</td> </tr> <tr> <td>Nickel:</td> <td style="text-align: center;">18</td> <td>☐ ND</td> </tr> <tr> <td>Zinc:</td> <td style="text-align: center;">27</td> <td>☐ ND</td> </tr> <tr> <td colspan="3">Comments:</td> </tr> </table>	Arsenic:		☒ ND	Barium:	74	☐ ND	Cadmium:		☒ ND	Chromium:	14	☐ ND	Lead:		☒ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	21	☐ ND	Nickel:	18	☐ ND	Zinc:	27	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	74	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	14	☐ ND																																					
Lead:		☒ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	21	☐ ND																																					
Nickel:	18	☐ ND																																					
Zinc:	27	☐ ND																																					
Comments:																																							
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																							
Constituent		Volume (Range %)																																					
<u>Soil</u>		<u>95-100</u>																																					
<u>Misc. debris</u>		<u>0-5</u>																																					



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-28-sand'])
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, soil

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Soil
Applicable Sample IDs: 'UST-28-sand' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as		Conversion Factor	Toxicity ^{Source}	Toxic Category	Concentration (mass %)				
	CAS	mg/kg	0.0001			X	A	B	C	D
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	74	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	14	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C					1.40E-03	
Copper	7440-50-8	21	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		2.10E-03				
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C						
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ⁴	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	18	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D						1.80E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X						
Zinc	7440-66-6	27	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.70E-03			
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0021000	0.0027000	0.0014000	0.0018

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.10E-03	2.70E-03	1.40E-03	1.80E-03		
	0.00E+00	2.10E-04	2.70E-05	1.40E-06	1.80E-07	0.0002386	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-29

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: oily water

Generation Process: clean out of UST-29

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected <u>[non TSCA or State Regulated]</u> ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm <u>[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]</u> ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	Total Metals ☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table border="1"><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>170</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td></td><td>☒ ND</td></tr><tr><td>Lead:</td><td>100</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td>79</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>89</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:	170	☐ ND	Cadmium:		☒ ND	Chromium:		☒ ND	Lead:	100	☐ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:		☒ ND	Nickel:	79	☐ ND	Zinc:	89	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	170	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:		☒ ND																																					
Lead:	100	☐ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:		☒ ND																																					
Nickel:	79	☐ ND																																					
Zinc:	89	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
liquid	95-100
Misc. solids	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-29']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-32-20191024*']) *note sample UST-32 from the F&B report was misidentified and should have been noted as UST-29 per letter dated Mar. 2, 2020 from Marten Law to Ecology
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, oily water

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-29' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0000001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	170	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	ND	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C					
Copper	7440-50-8	ND	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A					
Lead	7439-92-1	100	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.00E-05	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	79	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.90E-06
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X					
Zinc	7440-66-6	89	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			8.90E-06		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-29' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-29' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr	C					
Benzo(a)anthracene	56-55-3	0.034	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C				3.40E-09	
Chrysene	218-01-9	0.14	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C				1.40E-08	
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C				2.10E-09	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000000	0.0000089	0.0000100	0.0000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	0.00E+00	8.90E-06	1.00E-05	7.90E-06		
	0.00E+00	0.00E+00	8.90E-08	1.00E-08	7.90E-10	0.0000001	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-30

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: oily water

Generation Process: clean out of UST-30

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected <u>[non TSCA or State Regulated]</u> ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm <u>[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]</u> ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	Total Metals ☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td></td><td>☒ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td></td><td>☒ ND</td></tr><tr><td>Lead:</td><td></td><td>☒ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td></td><td>☒ ND</td></tr><tr><td>Zinc:</td><td></td><td>☒ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:		☒ ND	Cadmium:		☒ ND	Chromium:		☒ ND	Lead:		☒ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:		☒ ND	Nickel:		☒ ND	Zinc:		☒ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:		☒ ND																																					
Cadmium:		☒ ND																																					
Chromium:		☒ ND																																					
Lead:		☒ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:		☒ ND																																					
Nickel:		☒ ND																																					
Zinc:		☒ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
liquid	95-100
Misc. solids	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-30']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-31-20191024*']) *note sample UST-31 from the F&B report was misidentified and should have been noted as UST-30 per letter dated Mar. 2, 2020 from Marten Law to Ecology
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, oily water

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-30' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	Concentration (mass %)						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D	
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	ND	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	ND	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C						
Copper	7440-50-8	ND	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A						
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C						
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D						
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X						
Zinc	7440-66-6	ND	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B						
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-30' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-30' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000000	0.0000000	0.0000000	0.0000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000000	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Sand

Star Forge, Former Jorgenson Forge Property, UST-31-Sand

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: soil

Generation Process: clean out of UST-31

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 75 cubic yards (15,000 gal.)

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected <u>[non TSCA or State Regulated]</u> ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm <u>[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]</u> ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	Total Metals ☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>85</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>10</td><td>☐ ND</td></tr><tr><td>Lead:</td><td></td><td>☒ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td>17</td><td>☐ ND</td></tr><tr><td>Nickel:</td><td>13</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>22</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:	85	☐ ND	Cadmium:		☒ ND	Chromium:	10	☐ ND	Lead:		☒ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	17	☐ ND	Nickel:	13	☐ ND	Zinc:	22	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	85	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	10	☐ ND																																					
Lead:		☒ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	17	☐ ND																																					
Nickel:	13	☐ ND																																					
Zinc:	22	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Soil	95-100
Misc. debris	0-5



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-31-sand'])
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, soil

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Soil
Applicable Sample IDs: 'UST-31-sand' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg	Concentration*	Toxicity ^{Source}	Toxic Category	Concentration (mass %)				
						X	A	B	C	D
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	85	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	10	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C					1.00E-03	
Copper	7440-50-8	17	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ²	A		1.70E-03				
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C						
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	13	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D						1.30E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X						
Zinc	7440-66-6	22	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.20E-03			
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Soil
Applicable Sample IDs: 'UST-31-sand' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Soil
Applicable Sample IDs: 'UST-31-sand' (Lab Report 2004-139)
Sample Date: 04-22-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0017000	0.0022000	0.0010000	0.0013

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.70E-03	2.20E-03	1.00E-03	1.30E-03		
	0.00E+00	1.70E-04	2.20E-05	1.00E-06	1.30E-07	0.0001931	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-32

A. WASTE STREAM NAME AND GENERATION INFORMATION																																							
Waste Stream Name: oily water																																							
Generation Process: clean out of UST-32																																							
RCRA ID Number that waste will be managed under:		Total Quantity and/or Estimated Generation rate:																																					
Star Forge LLC, DBA Jorgenson Forge: WAD000602813		Approximately 3,000 gal.																																					
Other Descriptions (i.e. Shop, Project, Etc.):																																							
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																							
Physical State:		pH:																																					
☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint:																																					
		☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																					
Characteristic	PCB Content	TCLP Metals	Total Metals																																				
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr> <tr><td>Barium:</td><td></td><td>☒ ND</td></tr> <tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr> <tr><td>Chromium:</td><td></td><td>☒ ND</td></tr> <tr><td>Lead:</td><td></td><td>☒ ND</td></tr> <tr><td>Mercury:</td><td></td><td>☒ ND</td></tr> <tr><td>Selenium:</td><td></td><td>☒ ND</td></tr> <tr><td>Silver:</td><td></td><td>☒ ND</td></tr> <tr><td>Copper:</td><td></td><td>☒ ND</td></tr> <tr><td>Nickel:</td><td></td><td>☒ ND</td></tr> <tr><td>Zinc:</td><td></td><td>☒ ND</td></tr> <tr><td colspan="3">Comments:</td></tr> </table>	Arsenic:		☒ ND	Barium:		☒ ND	Cadmium:		☒ ND	Chromium:		☒ ND	Lead:		☒ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:		☒ ND	Nickel:		☒ ND	Zinc:		☒ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:		☒ ND																																					
Cadmium:		☒ ND																																					
Chromium:		☒ ND																																					
Lead:		☒ ND																																					
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Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:		☒ ND																																					
Nickel:		☒ ND																																					
Zinc:		☒ ND																																					
Comments:																																							
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																							
Constituent		Volume (Range %)																																					
liquid		95-100																																					
Misc. solids		0-5																																					



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 [Sample ID 'UST-32']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-29-20191024*']) *note sample UST-29 from the F&B report was misidentified and should have been noted as UST-32 per letter dated Mar. 2, 2020 from Marten Law to Ecology
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:

☐ TSCA Regulated Waste
TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, oily water

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-32' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	Concentration (mass %)						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D	
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B						
Barium	7440-39-3	ND	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	ND	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C						
Copper	7440-50-8	ND	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A						
Lead	7439-92-1	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C						
Manganese	7439-96-5	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D						
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X						
Zinc	7440-66-6	ND	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B						
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-32' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-32' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0000000	0.0000000	0.0000000	0.0000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000000	Non-Dangerous Waste

Sources 1 RTECS: Registry of Toxic Effects of Chemical Substances
 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Oily Water

Star Forge, Former Jorgenson Forge Property, UST-33

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: oily water

Generation Process: clean out of UST-33

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 3,000 gal.

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☒ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer	pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]
	Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals																																				
			☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L																																				
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected <u>[non TSCA or State Regulated]</u> ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm <u>[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]</u> ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: <u>TCLP Lead was non-detect (Lab Report 2004-139B)</u>	<table><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td><u>36,000</u></td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td><u>39</u></td><td>☐ ND</td></tr><tr><td>Chromium:</td><td><u>1,600</u></td><td>☐ ND</td></tr><tr><td>Lead:</td><td><u>6,300</u></td><td>☐ ND</td></tr><tr><td>Mercury:</td><td><u>14</u></td><td>☐ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td><u>3,200</u></td><td>☐ ND</td></tr><tr><td>Nickel:</td><td><u>420</u></td><td>☐ ND</td></tr><tr><td>Zinc:</td><td><u>6,900</u></td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:		☒ ND	Barium:	<u>36,000</u>	☐ ND	Cadmium:	<u>39</u>	☐ ND	Chromium:	<u>1,600</u>	☐ ND	Lead:	<u>6,300</u>	☐ ND	Mercury:	<u>14</u>	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	<u>3,200</u>	☐ ND	Nickel:	<u>420</u>	☐ ND	Zinc:	<u>6,900</u>	☐ ND	Comments:		
Arsenic:		☒ ND																																					
Barium:	<u>36,000</u>	☐ ND																																					
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Mercury:	<u>14</u>	☐ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	<u>3,200</u>	☐ ND																																					
Nickel:	<u>420</u>	☐ ND																																					
Zinc:	<u>6,900</u>	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
<u>liquid</u>	<u>95-100</u>
<u>Misc. solids</u>	<u>0-5</u>



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0 % [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0 % [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0 % [NOT APPLICABLE] ☐ > 1.0 % [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value of less than 0.001%, this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139 and 2004-139B [Sample ID 'UST-33']; Friedman & Bruya Lab Report 910503 [Sample ID 'UST-28-20191024*']) *note sample UST-28 from the F&B report was misidentified and should have been noted as UST-33 per letter dated Mar. 2, 2020 from Marten Law to Ecology
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:

☐ TSCA Regulated Waste
TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, oily water

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 04-30-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 05-05-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-33' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		µg/L	Conversion Factor	Concentration (mass %)					
Analyte		CAS	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	36000	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	39	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	3.90E-06				
Chromium	7440-47-3	1600	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.60E-04	
Copper	7440-50-8	3200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ¹	A		3.20E-04			
Lead	7439-92-1	6300	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				6.30E-04	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	14	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A		1.40E-06			
Nickel	7440-02-0	420	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					4.20E-05
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L 96hr ³	X					
Zinc	7440-66-6	6900	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			6.90E-04		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	25	LC Rat Inhalation 50.10 mg/kg ¹	D					2.50E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Ratbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ¹	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-33' (Lab Report 2004-139)
Sample Date: 04-21-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorboscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	ND	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	ND	LC50 <i>Lepomis macrochirus</i> (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Oily Water
Applicable Sample IDs: 'UST-33' (Lab Report 2004-139)
Sample Date: 04-21-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	ND	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	ND	LC50 Neanthes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	ND	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000039	0.0003214	0.0006900	0.0007900	0.0000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	3.90E-06	3.21E-04	6.90E-04	7.90E-04	4.45E-05		
	3.90E-06	3.21E-05	6.90E-06	7.90E-07	4.45E-09	0.0000437	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Slag

Star Forge, Former Jorgenson Forge Property, N. Tanks Slag

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: Slag

Generation Process: Excavation

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Total Quantity and/or Estimated Generation rate:

Approximately 1,200 tons

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																					
		Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☐ Not Detected ☐ [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☒ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: <u>Chromium only</u>	Total Metals ☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table><tr><td>Arsenic:</td><td>79</td><td>☐ ND</td></tr><tr><td>Barium:</td><td>31</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>3900</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>70</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Copper:</td><td>1200</td><td>☐ ND</td></tr><tr><td>Nickel:</td><td>7900</td><td>☐ ND</td></tr><tr><td>Zinc:</td><td>170</td><td>☐ ND</td></tr><tr><td colspan="3">Comments:</td></tr></table>	Arsenic:	79	☐ ND	Barium:	31	☐ ND	Cadmium:		☒ ND	Chromium:	3900	☐ ND	Lead:	70	☐ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	1200	☐ ND	Nickel:	7900	☐ ND	Zinc:	170	☐ ND	Comments:		
Arsenic:	79	☐ ND																																					
Barium:	31	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	3900	☐ ND																																					
Lead:	70	☐ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	1200	☐ ND																																					
Nickel:	7900	☐ ND																																					
Zinc:	170	☐ ND																																					
Comments:																																							

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
slag	100



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☒ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value which would designate as Toxic, WT-02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*. The fish bioassay demonstrated zero fish mortality and this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139C, 2004-139D, & 2004-139E (sample ID 'N. Tanks Slag')
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solids

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 06-08-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 06-08-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Slag
Applicable Sample IDs: 'N. Tanks Slag' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

Conversions
1 ng/kg = 10⁻⁶ % (mass %)
1 ug/kg = 10⁻⁵ %
1 mg/kg = 10⁻⁴ %

Analyte	Units Displayed as	mg/kg	Concentration*	Toxicity ^{Source}	Toxic Category	Concentration (mass %)				
						X	A	B	C	D
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	79	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			7.90E-03			
Barium	7440-39-3	31	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE						
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X						
Chromium	7440-47-3	3900	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C					3.90E-01	
Copper	7440-50-8	1200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.20E-01				
Lead	7439-92-1	70	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				7.00E-03		
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	7900	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.90E-01	
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X						
Zinc	7440-66-6	170	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.70E-02			
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C						
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D						
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D						
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D						
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C						
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D						
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C						
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C						
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D						
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C						
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C						

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Slag
Applicable Sample IDs: 'N. Tanks Slag' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ²	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.1	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.00E-05	
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B			
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	0.051	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C		5.10E-06	
2-methylnaphthalene	91-57-6	0.024	1630 mg/kg Oral Rat LD50 ²	D			2.40E-06
1-methylnaphthalene	90-12-0	0.018	1840 mg/kg Oral Rate LD50 ²	D			1.80E-06
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l/ 24-hr ²	C			
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	0.028	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.80E-06	
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Slag
Applicable Sample IDs: 'N. Tanks Slag' (Lab Report 2004-139)
Sample Date: 04-22-2020
 Book Designation by: Nathan Moxley

Fluoranthene	206-44-0	0.036	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				3.60E-06	
Pyrene	129-00-0	0.026	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C				2.60E-06	
Benzo(a)anthracene	56-55-3	0.01	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.00E-06	
Chrysene	218-01-9	0.031	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				3.10E-06	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.0385	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.85E-06	
Benzo(a)pyrene	50-32-8	0.014	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.40E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.015	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.50E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.016	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.60E-06	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ⁴	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.1200028	0.0249100	0.3970238	0.7900

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.20E-01	2.49E-02	3.97E-01	7.90E-01		
	0.00E+00	1.20E-02	2.49E-04	3.97E-04	7.90E-05	0.0127254	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



DANGEROUS WASTE DESIGNATION FORM – Slag

Star Forge, Former Jorgenson Forge Property, S. Tanks Slag

A. WASTE STREAM NAME AND GENERATION INFORMATION																																							
Waste Stream Name: Slag																																							
Generation Process: Excavation																																							
RCRA ID Number that waste will be managed under:		Total Quantity and/or Estimated Generation rate:																																					
Star Forge LLC, DBA Jorgenson Forge: WAD000602813		Approximately 1,000 tons																																					
Other Descriptions (i.e. Shop, Project, Etc.):																																							
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																							
Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☒ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A [D002] Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A [D001]																																					
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: As & Cr only	Total Metals ☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Arsenic:</td> <td style="width: 30%; text-align: center;">100</td> <td style="width: 40%; text-align: center;">☐ ND</td> </tr> <tr> <td>Barium:</td> <td style="text-align: center;">19</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Cadmium:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Chromium:</td> <td style="text-align: center;">3900</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Lead:</td> <td style="text-align: center;">64</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Mercury:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Selenium:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Silver:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Copper:</td> <td style="text-align: center;">1600</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Nickel:</td> <td style="text-align: center;">4900</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Zinc:</td> <td style="text-align: center;">96</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td colspan="3">Comments:</td> </tr> </table>	Arsenic:	100	☐ ND	Barium:	19	☐ ND	Cadmium:		☒ ND	Chromium:	3900	☐ ND	Lead:	64	☐ ND	Mercury:		☒ ND	Selenium:		☒ ND	Silver:		☒ ND	Copper:	1600	☐ ND	Nickel:	4900	☐ ND	Zinc:	96	☐ ND	Comments:		
Arsenic:	100	☐ ND																																					
Barium:	19	☐ ND																																					
Cadmium:		☒ ND																																					
Chromium:	3900	☐ ND																																					
Lead:	64	☐ ND																																					
Mercury:		☒ ND																																					
Selenium:		☒ ND																																					
Silver:		☒ ND																																					
Copper:	1600	☐ ND																																					
Nickel:	4900	☐ ND																																					
Zinc:	96	☐ ND																																					
Comments:																																							
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																							
Constituent		Volume (Range %)																																					
slag		100																																					



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW]	☒ < 0.01 % [NOT APPLICABLE]	☒ < 1.0% [NOT APPLICABLE]
☒ 0.001 ≥ 1.0 % [WT02 – DW]	☐ 0.01 to 1.0% [WP02 – DW]	☐ > 1.0% [WP03 – EHW]
☐ ≥ 1.0% [WT01 – EHW]	☐ > 1.0 % [WP01 – EHW]	

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, resulting in a calculated equivalent concentration value which would designate as Toxic, WT-02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*. The fish bioassay demonstrated zero fish mortality and this waste stream is therefore designated as non-dangerous waste.

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2004-139C, 2004-139D, & 2004-139E (sample ID 'S. Tanks Slag')
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:

☐ TSCA Regulated Waste
TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solids

Designation Performed by: Nathan Moxley, LHG
Title: Project Geologist

Date: 06-08-2020

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 06-08-2020

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Slag
Applicable Sample IDs: 'S. Tanks Slag' (Lab Report 2004-139)
Sample Date: 04-22-2020
Book Designation by: Nathan Moxley

Conversions 1 ng/kg = 10⁻⁶ % (mass %)
1 ug/kg = 10⁻⁵ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	100	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.00E-02		
Barium	7440-39-3	19	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ²	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	3900	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				3.90E-01	
Copper	7440-50-8	1600	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.60E-01			
Lead	7439-92-1	64	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				6.40E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	4900	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					4.90E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	96	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ²	B			9.60E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ²	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ²	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ²	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	0.017	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			1.70E-06	
2-methylnaphthalene	91-57-6	0.0091	1630 mg/kg Oral Rat LD50 ²	D				9.10E-07
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l/ 24-hr ²	C				
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ²	C				
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ²	B				
Phenanthrene	85-01-8	0.029	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.90E-06		
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	0.034	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C				3.40E-06	
Pyrene	129-00-0	0.027	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C				2.70E-06	
Benzo(a)anthracene	56-55-3	0.01	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.00E-06	
Chrysene	218-01-9	0.024	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C				2.40E-06	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.0325	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.25E-06	
Benzo(a)pyrene	50-32-8	0.011	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.10E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.013	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.30E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.014	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.40E-06	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ⁴	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.1600029	0.0196000	0.3964183	0.4900

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.60E-01	1.96E-02	3.96E-01	4.90E-01		
	0.00E+00	1.60E-02	1.96E-04	3.96E-04	4.90E-05	0.0166417	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 29, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Waste Designation
Laboratory Reference No. 2004-139

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on April 22, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 29, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139
Project: Star Forge UST Waste Designation

Case Narrative

Samples were collected on April 21 and 22, 2020 and received by the laboratory on April 22, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D (water) Analysis

Samples UST-34, UST-33, UST-32, UST-30, UST-29 and UST-27 were analyzed at a dilution due to the presence of product in the samples.

Semivolatiles EPA 8270E/SIM (water) Analysis

Sample UST-27 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

PCBs EPA 8082A (water) Analysis

Sample UST-33 (40%) had DCB surrogate below quality control limits 50-153% due to a high product concentration, resulting in heavy emulsion and an elevated final volume in the extraction process. No further action was performed.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: April 29, 2020
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VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-34					
Laboratory ID:	04-139-01					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Acetone	ND	10	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	2.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	10	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-34					
Laboratory ID:	04-139-01					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-127				
Toluene-d8	96	80-127				
4-Bromofluorobenzene	103	78-125				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-33					
Laboratory ID:	04-139-02					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Acetone	25	10	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	2.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	10	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-33					
Laboratory ID:	04-139-02					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	93	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	104	78-125				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-32					
Laboratory ID:	04-139-03					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Acetone	ND	10	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	2.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	10	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	



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 Project: Star Forge UST Waste Designation

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-32					
Laboratory ID:	04-139-03					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-127				
Toluene-d8	99	80-127				
4-Bromofluorobenzene	103	78-125				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-30					
Laboratory ID:	04-139-04					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Acetone	ND	10	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	2.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	10	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-30					
Laboratory ID:	04-139-04					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-127				
Toluene-d8	93	80-127				
4-Bromofluorobenzene	100	78-125				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-29					
Laboratory ID:	04-139-05					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Acetone	ND	10	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	2.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	10	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-28-20	4-28-20	



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 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-29					
Laboratory ID:	04-139-05					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	4.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	105	78-125				



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 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-27					
Laboratory ID:	04-139-06					
Dichlorodifluoromethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Chloromethane	ND	2.0	EPA 8260D	4-29-20	4-29-20	
Vinyl Chloride	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Bromomethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Chloroethane	ND	2.0	EPA 8260D	4-29-20	4-29-20	
Trichlorofluoromethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloroethene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Acetone	ND	15	EPA 8260D	4-29-20	4-29-20	
Iodomethane	ND	3.0	EPA 8260D	4-29-20	4-29-20	
Carbon Disulfide	ND	0.58	EPA 8260D	4-29-20	4-29-20	
Methylene Chloride	ND	2.0	EPA 8260D	4-29-20	4-29-20	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Methyl t-Butyl Ether	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Vinyl Acetate	ND	2.8	EPA 8260D	4-29-20	4-29-20	
2,2-Dichloropropane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
2-Butanone	ND	13	EPA 8260D	4-29-20	4-29-20	
Bromochloromethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Chloroform	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1,1-Trichloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Carbon Tetrachloride	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloropropene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Benzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2-Dichloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Trichloroethene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2-Dichloropropane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Dibromomethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Bromodichloromethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
2-Chloroethyl Vinyl Ether	ND	2.8	EPA 8260D	4-29-20	4-29-20	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Methyl Isobutyl Ketone	ND	5.4	EPA 8260D	4-29-20	4-29-20	
Toluene	ND	2.0	EPA 8260D	4-29-20	4-29-20	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260D	4-29-20	4-29-20	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-27					
Laboratory ID:	04-139-06					
1,1,2-Trichloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Tetrachloroethene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,3-Dichloropropane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
2-Hexanone	ND	5.4	EPA 8260D	4-29-20	4-29-20	
Dibromochloromethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2-Dibromoethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Chlorobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Ethylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
m,p-Xylene	ND	0.80	EPA 8260D	4-29-20	4-29-20	
o-Xylene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Styrene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Bromoform	ND	2.0	EPA 8260D	4-29-20	4-29-20	
Isopropylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Bromobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2,3-Trichloropropane	ND	0.40	EPA 8260D	4-29-20	4-29-20	
n-Propylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
2-Chlorotoluene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
4-Chlorotoluene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,3,5-Trimethylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
tert-Butylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2,4-Trimethylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
sec-Butylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,3-Dichlorobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
p-Isopropyltoluene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,4-Dichlorobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2-Dichlorobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
n-Butylbenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
1,2-Dibromo-3-chloropropane	ND	2.6	EPA 8260D	4-29-20	4-29-20	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
Hexachlorobutadiene	ND	2.0	EPA 8260D	4-29-20	4-29-20	
Naphthalene	ND	2.0	EPA 8260D	4-29-20	4-29-20	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	4-29-20	4-29-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	92	75-127				
Toluene-d8	98	80-127				
4-Bromofluorobenzene	105	78-125				



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 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Chloromethane	ND	1.0	EPA 8260D	4-28-20	4-28-20	
Vinyl Chloride	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Bromomethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Chloroethane	ND	1.0	EPA 8260D	4-28-20	4-28-20	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Acetone	ND	5.0	EPA 8260D	4-28-20	4-28-20	
Iodomethane	ND	1.0	EPA 8260D	4-28-20	4-28-20	
Carbon Disulfide	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Methylene Chloride	ND	1.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Vinyl Acetate	ND	1.0	EPA 8260D	4-28-20	4-28-20	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
2-Butanone	ND	5.0	EPA 8260D	4-28-20	4-28-20	
Bromochloromethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Chloroform	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Benzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Trichloroethene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Dibromomethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Bromodichloromethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	4-28-20	4-28-20	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Toluene	ND	1.0	EPA 8260D	4-28-20	4-28-20	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-28-20	4-28-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Tetrachloroethene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
2-Hexanone	ND	2.0	EPA 8260D	4-28-20	4-28-20	
Dibromochloromethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Chlorobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Ethylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
m,p-Xylene	ND	0.40	EPA 8260D	4-28-20	4-28-20	
o-Xylene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Styrene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Bromoform	ND	1.0	EPA 8260D	4-28-20	4-28-20	
Isopropylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Bromobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-28-20	4-28-20	
n-Propylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
n-Butylbenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	4-28-20	4-28-20	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-28-20	4-28-20	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-28-20	4-28-20	
Naphthalene	ND	1.0	EPA 8260D	4-28-20	4-28-20	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	4-28-20	4-28-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0429W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Chloromethane	ND	1.0	EPA 8260D	4-29-20	4-29-20	
Vinyl Chloride	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Bromomethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Chloroethane	ND	1.0	EPA 8260D	4-29-20	4-29-20	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Acetone	ND	7.3	EPA 8260D	4-29-20	4-29-20	
Iodomethane	ND	1.5	EPA 8260D	4-29-20	4-29-20	
Carbon Disulfide	ND	0.29	EPA 8260D	4-29-20	4-29-20	
Methylene Chloride	ND	1.0	EPA 8260D	4-29-20	4-29-20	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Vinyl Acetate	ND	1.4	EPA 8260D	4-29-20	4-29-20	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
2-Butanone	ND	6.5	EPA 8260D	4-29-20	4-29-20	
Bromochloromethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Chloroform	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Benzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Trichloroethene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Dibromomethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Bromodichloromethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
2-Chloroethyl Vinyl Ether	ND	1.4	EPA 8260D	4-29-20	4-29-20	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Methyl Isobutyl Ketone	ND	2.7	EPA 8260D	4-29-20	4-29-20	
Toluene	ND	1.0	EPA 8260D	4-29-20	4-29-20	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-29-20	4-29-20	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0429W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Tetrachloroethene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
2-Hexanone	ND	2.7	EPA 8260D	4-29-20	4-29-20	
Dibromochloromethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Chlorobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Ethylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
m,p-Xylene	ND	0.40	EPA 8260D	4-29-20	4-29-20	
o-Xylene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Styrene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Bromoform	ND	1.0	EPA 8260D	4-29-20	4-29-20	
Isopropylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Bromobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-29-20	4-29-20	
n-Propylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
n-Butylbenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260D	4-29-20	4-29-20	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-29-20	4-29-20	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-29-20	4-29-20	
Naphthalene	ND	1.0	EPA 8260D	4-29-20	4-29-20	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	4-29-20	4-29-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0428W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.5	9.67	10.0	10.0	105	97	63-130	8	17	
Benzene	10.9	10.3	10.0	10.0	109	103	76-125	6	19	
Trichloroethene	11.6	11.3	10.0	10.0	116	113	76-121	3	18	
Toluene	10.9	10.7	10.0	10.0	109	107	80-124	2	18	
Chlorobenzene	11.5	11.1	10.0	10.0	115	111	75-120	4	19	
Surrogate:										
Dibromofluoromethane					95	94	75-127			
Toluene-d8					97	99	80-127			
4-Bromofluorobenzene					95	95	78-125			
Laboratory ID:	SB0429W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.13	9.77	10.0	10.0	91	98	63-130	7	17	
Benzene	9.61	10.3	10.0	10.0	96	103	76-125	7	19	
Trichloroethene	10.0	10.9	10.0	10.0	100	109	76-121	9	18	
Toluene	9.59	10.4	10.0	10.0	96	104	80-124	8	18	
Chlorobenzene	10.2	11.2	10.0	10.0	102	112	75-120	9	19	
Surrogate:										
Dibromofluoromethane					95	91	75-127			
Toluene-d8					96	97	80-127			
4-Bromofluorobenzene					94	95	78-125			



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VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Product

Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-21					
Laboratory ID:	04-139-07					
Dichlorodifluoromethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	23	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	23	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	45	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	23	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	23	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	23	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	23	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	23	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	23	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	23	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	4.5	EPA 8260D	4-23-20	4-23-20	



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 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-21					
Laboratory ID:	04-139-07					
1,1,2-Trichloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	23	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	9.1	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	23	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	4.5	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	23	4.5	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	110	4.5	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	17	4.5	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	30	4.5	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	110	4.5	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	23	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	23	EPA 8260D	4-23-20	4-23-20	
Naphthalene	500	23	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	4.5	EPA 8260D	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	76-131				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	100	71-130				



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 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Product

Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423P1					
Dichlorodifluoromethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	0.50	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	0.25	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	0.25	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	0.25	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	0.050	EPA 8260D	4-23-20	4-23-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423P1 1					
1,1,2-Trichloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	0.10	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	0.25	EPA 8260D	4-23-20	4-23-20	
Naphthalene	ND	0.25	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	4-23-20	4-23-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Product

Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB0423P1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0502	0.0464	0.0500	0.0500	100	93	57-133	8		18	
Benzene	0.0528	0.0487	0.0500	0.0500	106	97	71-129	8		16	
Trichloroethene	0.0527	0.0474	0.0500	0.0500	105	95	71-122	11		16	
Toluene	0.0508	0.0467	0.0500	0.0500	102	93	74-125	8		15	
Chlorobenzene	0.0515	0.0470	0.0500	0.0500	103	94	72-120	9		14	
Surrogate:											
Dibromofluoromethane					100	98	76-131				
Toluene-d8					99	99	78-128				
4-Bromofluorobenzene					99	97	71-130				



Date of Report: April 29, 2020
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 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST-31-Sand						
Laboratory ID: 04-139-08						
Dichlorodifluoromethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	0.0070	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	



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 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-31-Sand					
Laboratory ID:	04-139-08					
1,1,2-Trichloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	0.0014	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Naphthalene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	0.00070	EPA 8260D	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	100	76-131				
Toluene-d8	100	78-128				
4-Bromofluorobenzene	96	71-130				



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Date of Report: April 29, 2020
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 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		UST-28-Sand				
Laboratory ID:		04-139-09				
Dichlorodifluoromethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	0.0056	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	



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 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-28-Sand					
Laboratory ID:	04-139-09					
1,1,2-Trichloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	0.0011	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
Naphthalene	ND	0.0028	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	0.00056	EPA 8260D	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
<i>Dibromofluoromethane</i>	101	76-131				
<i>Toluene-d8</i>	102	78-128				
<i>4-Bromofluorobenzene</i>	98	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		UST-26-Sand				
Laboratory ID:		04-139-10				
Dichlorodifluoromethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	0.0071	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	



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 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-26-Sand					
Laboratory ID:	04-139-10					
1,1,2-Trichloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	0.0014	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
Naphthalene	ND	0.0035	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	0.00071	EPA 8260D	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	100	76-131				
Toluene-d8	99	78-128				
4-Bromofluorobenzene	99	71-130				



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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Chloromethane	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Bromomethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Chloroethane	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Acetone	ND	0.010	EPA 8260D	4-23-20	4-23-20	
Iodomethane	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Methylene Chloride	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
2-Butanone	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Bromochloromethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Chloroform	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Benzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Trichloroethene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Dibromomethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Toluene	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
2-Hexanone	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Chlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Ethylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
m,p-Xylene	ND	0.0020	EPA 8260D	4-23-20	4-23-20	
o-Xylene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Styrene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Bromoform	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Bromobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
Naphthalene	ND	0.0050	EPA 8260D	4-23-20	4-23-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	4-23-20	4-23-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0423S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0502	0.0464	0.0500	0.0500	100	93	57-133	8	18	
Benzene	0.0528	0.0487	0.0500	0.0500	106	97	71-129	8	16	
Trichloroethene	0.0527	0.0474	0.0500	0.0500	105	95	71-122	11	16	
Toluene	0.0508	0.0467	0.0500	0.0500	102	93	74-125	8	15	
Chlorobenzene	0.0515	0.0470	0.0500	0.0500	103	94	72-120	9	14	
Surrogate:										
Dibromofluoromethane					100	98	76-131			
Toluene-d8					99	99	78-128			
4-Bromofluorobenzene					99	97	71-130			



Date of Report: April 29, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-34					
Laboratory ID:	04-139-01					
n-Nitrosodimethylamine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	5.5	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.1	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.1	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.1	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.14	EPA 8270E/SIM	4-23-20	4-23-20	U1
4-Chloroaniline	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.11	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.11	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	5.5	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	U1
3-Nitroaniline	ND	1.1	EPA 8270E	4-23-20	4-23-20	



Date of Report: April 29, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-34					
Laboratory ID:	04-139-01					
2,4-Dinitrophenol	ND	5.5	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	0.11	EPA 8270E/SIM	4-23-20	4-23-20	
4-Nitrophenol	ND	5.5	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.1	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.1	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.29	EPA 8270E/SIM	4-23-20	4-23-20	U1
4,6-Dinitro-2-methylphenol	ND	5.5	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	5.5	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	U1
Anthracene	ND	0.39	EPA 8270E/SIM	4-23-20	4-23-20	U1
Carbazole	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	5.5	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	0.27	EPA 8270E/SIM	4-23-20	4-23-20	U1
Benzidine	ND	5.5	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.90	EPA 8270E/SIM	4-23-20	4-23-20	U1
Butylbenzylphthalate	ND	1.1	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	5.5	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	0.018	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Chrysene	0.067	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	5.5	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.1	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	0.016	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo(j,k)fluoranthene	ND	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	ND	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	ND	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	ND	0.011	EPA 8270E/SIM	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	45	10 - 75				
Phenol-d6	34	10 - 82				
Nitrobenzene-d5	75	30 - 101				
2-Fluorobiphenyl	83	37 - 101				
2,4,6-Tribromophenol	108	27 - 115				
Terphenyl-d14	72	45 - 108				



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
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SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-33					
Laboratory ID:	04-139-02					
n-Nitrosodimethylamine	ND	230	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	230	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	230	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	1200	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	230	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	230	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	230	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	230	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	230	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	230	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	230	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	230	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	23	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	230	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	230	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	23	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	23	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	230	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	230	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	230	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	230	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	1200	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	230	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	46	EPA 8270E/SIM	4-23-20	4-24-20	
3-Nitroaniline	ND	230	EPA 8270E	4-23-20	4-23-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-33					
Laboratory ID:	04-139-02					
2,4-Dinitrophenol	ND	1200	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	46	EPA 8270E/SIM	4-23-20	4-24-20	
4-Nitrophenol	ND	1200	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	230	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	230	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	230	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	230	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	230	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	230	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	23	EPA 8270E/SIM	4-23-20	4-23-20	
4,6-Dinitro-2-methylphenol	ND	1200	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	230	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	230	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	230	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	230	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	1200	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	30	EPA 8270E/SIM	4-23-20	4-23-20	U1
Anthracene	ND	27	EPA 8270E/SIM	4-23-20	4-23-20	U1
Carbazole	ND	230	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	1200	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	23	EPA 8270E/SIM	4-23-20	4-23-20	
Benzidine	ND	1200	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	43	EPA 8270E/SIM	4-23-20	4-23-20	U1
Butylbenzylphthalate	ND	230	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	1200	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	230	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Chrysene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
bis(2-Ethylhexyl)phthalate	ND	1200	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	230	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Benzo(j,k)fluoranthene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Benzo[a]pyrene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Indeno[1,2,3-cd]pyrene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Dibenz[a,h]anthracene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Benzo[g,h,i]perylene	ND	4.6	EPA 8270E/SIM	4-23-20	4-24-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	---	10 - 75				S
Phenol-d6	---	10 - 82				S
Nitrobenzene-d5	---	30 - 101				S
2-Fluorobiphenyl	---	37 - 101				S
2,4,6-Tribromophenol	---	27 - 115				S
Terphenyl-d14	---	45 - 108				S



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-32					
Laboratory ID:	04-139-03					
n-Nitrosodimethylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	5.1	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.0	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	5.1	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
3-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-32					
Laboratory ID:	04-139-03					
2,4-Dinitrophenol	ND	5.1	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4-Nitrophenol	ND	5.1	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4,6-Dinitro-2-methylphenol	ND	5.1	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	5.1	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Anthracene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Carbazole	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	5.1	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Benzidine	ND	5.1	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Butylbenzylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	5.1	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Chrysene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	5.1	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	39	10 - 75				
Phenol-d6	29	10 - 82				
Nitrobenzene-d5	62	30 - 101				
2-Fluorobiphenyl	65	37 - 101				
2,4,6-Tribromophenol	76	27 - 115				
Terphenyl-d14	67	45 - 108				



Date of Report: April 29, 2020
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 Laboratory Reference: 2004-139
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-30					
Laboratory ID:	04-139-04					
n-Nitrosodimethylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	6.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	6.0	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
3-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-30					
Laboratory ID:	04-139-04					
2,4-Dinitrophenol	ND	6.0	EPA 8270E	4-23-20	4-23-20	U1
Acenaphthene	ND	0.14	EPA 8270E/SIM	4-23-20	4-23-20	
4-Nitrophenol	ND	6.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
4,6-Dinitro-2-methylphenol	ND	6.0	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	6.0	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Anthracene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Carbazole	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	6.0	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Benzidine	ND	6.0	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.19	EPA 8270E/SIM	4-23-20	4-23-20	U1
Butylbenzylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	6.0	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	ND	0.022	EPA 8270E/SIM	4-23-20	4-23-20	U1
Chrysene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	6.0	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo(j,k)fluoranthene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	40	10 - 75				
Phenol-d6	31	10 - 82				
Nitrobenzene-d5	61	30 - 101				
2-Fluorobiphenyl	65	37 - 101				
2,4,6-Tribromophenol	80	27 - 115				
Terphenyl-d14	62	45 - 108				



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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-29					
Laboratory ID:	04-139-05					
n-Nitrosodimethylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	5.9	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	5.9	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.59	EPA 8270E/SIM	4-23-20	4-24-20	
3-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-29					
Laboratory ID:	04-139-05					
2,4-Dinitrophenol	ND	5.9	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	1.2	EPA 8270E/SIM	4-23-20	4-24-20	U1
4-Nitrophenol	ND	5.9	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.59	EPA 8270E/SIM	4-23-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	5.9	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	5.9	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	0.93	EPA 8270E/SIM	4-23-20	4-24-20	U1
Anthracene	ND	0.79	EPA 8270E/SIM	4-23-20	4-24-20	U1
Carbazole	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	5.9	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	0.59	EPA 8270E/SIM	4-23-20	4-24-20	
Benzidine	ND	5.9	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.59	EPA 8270E/SIM	4-23-20	4-24-20	
Butylbenzylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	5.9	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	0.034	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Chrysene	0.14	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	5.9	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	0.021	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo(j,k)fluoranthene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	41	10 - 75				
Phenol-d6	30	10 - 82				
Nitrobenzene-d5	52	30 - 101				
2-Fluorobiphenyl	88	37 - 101				
2,4,6-Tribromophenol	90	27 - 115				
Terphenyl-d14	48	45 - 108				



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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-27					
Laboratory ID:	04-139-06					
n-Nitrosodimethylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	6.1	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.2	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.12	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	6.1	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
3-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-27					
Laboratory ID:	04-139-06					
2,4-Dinitrophenol	ND	6.1	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
4-Nitrophenol	ND	6.1	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.2	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	30	EPA 8270E	4-23-20	4-24-20	
n-Nitrosodiphenylamine	ND	6.1	EPA 8270E	4-23-20	4-24-20	
1,2-Diphenylhydrazine	ND	6.1	EPA 8270E	4-23-20	4-24-20	
4-Bromophenyl-phenylether	ND	6.1	EPA 8270E	4-23-20	4-24-20	
Hexachlorobenzene	ND	6.1	EPA 8270E	4-23-20	4-24-20	
Pentachlorophenol	ND	30	EPA 8270E	4-23-20	4-24-20	
Phenanthrene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
Anthracene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
Carbazole	ND	6.1	EPA 8270E	4-23-20	4-24-20	
Di-n-butylphthalate	ND	30	EPA 8270E	4-23-20	4-24-20	
Fluoranthene	ND	0.61	EPA 8270E/SIM	4-23-20	4-24-20	
Benzidine	ND	6.1	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.69	EPA 8270E/SIM	4-23-20	4-24-20	U1
Butylbenzylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	6.1	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	0.045	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Chrysene	0.19	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	6.1	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.2	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	0.097	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo(j,k)fluoranthene	0.022	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	0.043	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	0.042	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	0.041	0.012	EPA 8270E/SIM	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	35	10 - 75				
Phenol-d6	28	10 - 82				
Nitrobenzene-d5	39	30 - 101				
2-Fluorobiphenyl	69	37 - 101				
2,4,6-Tribromophenol	51	27 - 115				
Terphenyl-d14	41	45 - 108				Q



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423W2					
n-Nitrosodimethylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Pyridine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Phenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Aniline	ND	5.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethyl)ether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Chlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,3-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,4-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzyl alcohol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Dichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Methylphenol (o-Cresol)	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroisopropyl)ether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.0	EPA 8270E	4-23-20	4-23-20	
n-Nitroso-di-n-propylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachloroethane	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Nitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Isophorone	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Nitrophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dimethylphenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis(2-Chloroethoxy)methane	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Naphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4-Chloroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachlorobutadiene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Chloro-3-methylphenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
1-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Hexachlorocyclopentadiene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4,6-Trichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3-Dichloroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,4,5-Trichlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Chloronaphthalene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,4-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Dimethylphthalate	ND	5.0	EPA 8270E	4-23-20	4-23-20	
1,3-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,6-Dinitrotoluene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Dinitrobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Acenaphthylene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
3-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423W2					
2,4-Dinitrophenol	ND	5.0	EPA 8270E	4-23-20	4-23-20	
Acenaphthene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4-Nitrophenol	ND	5.0	EPA 8270E	4-23-20	4-23-20	
2,4-Dinitrotoluene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Dibenzofuran	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3,5,6-Tetrachlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
2,3,4,6-Tetrachlorophenol	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Diethylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Chlorophenyl-phenylether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Nitroaniline	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Fluorene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
4,6-Dinitro-2-methylphenol	ND	5.0	EPA 8270E	4-23-20	4-23-20	
n-Nitrosodiphenylamine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
1,2-Diphenylhydrazine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
4-Bromophenyl-phenylether	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Hexachlorobenzene	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Pentachlorophenol	ND	5.0	EPA 8270E	4-23-20	4-23-20	
Phenanthrene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Anthracene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Carbazole	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Di-n-butylphthalate	ND	5.0	EPA 8270E	4-23-20	4-23-20	
Fluoranthene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Benzidine	ND	5.0	EPA 8270E	4-23-20	4-23-20	
Pyrene	ND	0.10	EPA 8270E/SIM	4-23-20	4-23-20	
Butylbenzylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
bis-2-Ethylhexyladipate	ND	5.0	EPA 8270E	4-23-20	4-23-20	
3,3'-Dichlorobenzidine	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzo[a]anthracene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Chrysene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
bis(2-Ethylhexyl)phthalate	ND	5.0	EPA 8270E	4-23-20	4-23-20	
Di-n-octylphthalate	ND	1.0	EPA 8270E	4-23-20	4-23-20	
Benzo[b]fluoranthene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[j,k]fluoranthene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Indeno[1,2,3-cd]pyrene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270E/SIM	4-23-20	4-23-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	36	10 - 75				
Phenol-d6	26	10 - 82				
Nitrobenzene-d5	59	30 - 101				
2-Fluorobiphenyl	58	37 - 101				
2,4,6-Tribromophenol	84	27 - 115				
Terphenyl-d14	76	45 - 108				



Date of Report: April 29, 2020
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 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	04-128-01									
	MS	MSD	MS	MSD		MS	MSD			
Phenol	197	201	160	160	100	61	63	20 - 108	2	30
2-Chlorophenol	111	108	160	160	ND	69	68	24 - 105	3	37
1,4-Dichlorobenzene	47.6	45.6	80.0	80.0	ND	60	57	24 - 87	4	39
n-Nitroso-di-n-propylamine	72.0	75.4	80.0	80.0	ND	90	94	25 - 133	5	30
1,2,4-Trichlorobenzene	62.3	59.8	80.0	80.0	ND	78	75	34 - 95	4	35
4-Chloro-3-methylphenol	163	161	160	160	ND	102	101	44 - 113	1	23
Acenaphthene	62.1	61.3	80.0	80.0	ND	78	77	47 - 106	1	19
4-Nitrophenol	192	171	160	160	ND	120	107	20 - 120	12	35
2,4-Dinitrotoluene	58.5	59.0	80.0	80.0	ND	73	74	45 - 106	1	21
Pentachlorophenol	152	148	160	160	ND	95	93	20 - 136	3	40
Pyrene	55.8	55.8	80.0	80.0	ND	70	70	51 - 111	0	16
Surrogate:										
2-Fluorophenol						59	59	10 - 75		
Phenol-d6						61	63	10 - 82		
Nitrobenzene-d5						89	85	30 - 101		
2-Fluorobiphenyl						79	79	37 - 101		
2,4,6-Tribromophenol						76	75	27 - 115		
Terphenyl-d14						70	70	45 - 108		



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-31-Sand					
Laboratory ID:	04-139-08					
n-Nitrosodimethylamine	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Pyridine	ND	0.38	EPA 8270E	4-24-20	4-24-20	
Phenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Aniline	ND	0.19	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethyl)ether	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Chlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,3-Dichlorobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,4-Dichlorobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Benzyl alcohol	ND	0.19	EPA 8270E	4-24-20	4-24-20	
1,2-Dichlorobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Methylphenol (o-Cresol)	ND	0.038	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroisopropyl)ether	ND	0.038	EPA 8270E	4-24-20	4-24-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.038	EPA 8270E	4-24-20	4-24-20	
n-Nitroso-di-n-propylamine	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Hexachloroethane	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Nitrobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Isophorone	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Nitrophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,4-Dimethylphenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethoxy)methane	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,4-Dichlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,2,4-Trichlorobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Naphthalene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
4-Chloroaniline	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Hexachlorobutadiene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
4-Chloro-3-methylphenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Methylnaphthalene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
1-Methylnaphthalene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Hexachlorocyclopentadiene	ND	0.051	EPA 8270E	4-24-20	4-24-20	
2,4,6-Trichlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,3-Dichloroaniline	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,4,5-Trichlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Chloronaphthalene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2-Nitroaniline	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,4-Dinitrobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Dimethylphthalate	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,3-Dinitrobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,6-Dinitrotoluene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,2-Dinitrobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Acenaphthylene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
3-Nitroaniline	ND	0.038	EPA 8270E	4-24-20	4-24-20	



Date of Report: April 29, 2020
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SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-31-Sand					
Laboratory ID:	04-139-08					
2,4-Dinitrophenol	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Acenaphthene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
4-Nitrophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,4-Dinitrotoluene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Dibenzofuran	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,3,5,6-Tetrachlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
2,3,4,6-Tetrachlorophenol	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Diethylphthalate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
4-Chlorophenyl-phenylether	ND	0.038	EPA 8270E	4-24-20	4-24-20	
4-Nitroaniline	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Fluorene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	0.19	EPA 8270E	4-24-20	4-24-20	
n-Nitrosodiphenylamine	ND	0.038	EPA 8270E	4-24-20	4-24-20	
1,2-Diphenylhydrazine	ND	0.038	EPA 8270E	4-24-20	4-24-20	
4-Bromophenyl-phenylether	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Hexachlorobenzene	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Pentachlorophenol	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Phenanthrene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Anthracene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Carbazole	ND	0.038	EPA 8270E	4-24-20	4-24-20	
Di-n-butylphthalate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Fluoranthene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Pyrene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Butylbenzylphthalate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
bis-2-Ethylhexyladipate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
3,3'-Dichlorobenzidine	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Benzo[a]anthracene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Chrysene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
bis(2-Ethylhexyl)phthalate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Di-n-octylphthalate	ND	0.19	EPA 8270E	4-24-20	4-24-20	
Benzo[b]fluoranthene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo(j,k)fluoranthene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[a]pyrene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Indeno[1,2,3-cd]pyrene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[g,h,i]perylene	ND	0.0075	EPA 8270E/SIM	4-24-20	4-24-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	53	21 - 107				
Phenol-d6	63	30 - 106				
Nitrobenzene-d5	55	28 - 109				
2-Fluorobiphenyl	74	37 - 107				
2,4,6-Tribromophenol	84	39 - 116				
Terphenyl-d14	89	41 - 113				



Date of Report: April 29, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-28-Sand					
Laboratory ID:	04-139-09					
n-Nitrosodimethylamine	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Pyridine	ND	0.39	EPA 8270E	4-24-20	4-24-20	
Phenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Aniline	ND	0.20	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethyl)ether	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Chlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,3-Dichlorobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,4-Dichlorobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Benzyl alcohol	ND	0.20	EPA 8270E	4-24-20	4-24-20	
1,2-Dichlorobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Methylphenol (o-Cresol)	ND	0.039	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroisopropyl)ether	ND	0.039	EPA 8270E	4-24-20	4-24-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.039	EPA 8270E	4-24-20	4-24-20	
n-Nitroso-di-n-propylamine	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Hexachloroethane	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Nitrobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Isophorone	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Nitrophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,4-Dimethylphenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethoxy)methane	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,4-Dichlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,2,4-Trichlorobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Naphthalene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
4-Chloroaniline	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Hexachlorobutadiene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
4-Chloro-3-methylphenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Methylnaphthalene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
1-Methylnaphthalene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Hexachlorocyclopentadiene	ND	0.054	EPA 8270E	4-24-20	4-24-20	
2,4,6-Trichlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,3-Dichloroaniline	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,4,5-Trichlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Chloronaphthalene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2-Nitroaniline	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,4-Dinitrobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Dimethylphthalate	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,3-Dinitrobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,6-Dinitrotoluene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,2-Dinitrobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Acenaphthylene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
3-Nitroaniline	ND	0.039	EPA 8270E	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-28-Sand					
Laboratory ID:	04-139-09					
2,4-Dinitrophenol	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Acenaphthene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
4-Nitrophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,4-Dinitrotoluene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Dibenzofuran	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,3,5,6-Tetrachlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
2,3,4,6-Tetrachlorophenol	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Diethylphthalate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
4-Chlorophenyl-phenylether	ND	0.039	EPA 8270E	4-24-20	4-24-20	
4-Nitroaniline	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Fluorene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270E	4-24-20	4-24-20	
n-Nitrosodiphenylamine	ND	0.039	EPA 8270E	4-24-20	4-24-20	
1,2-Diphenylhydrazine	ND	0.039	EPA 8270E	4-24-20	4-24-20	
4-Bromophenyl-phenylether	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Hexachlorobenzene	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Pentachlorophenol	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Phenanthrene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Anthracene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Carbazole	ND	0.039	EPA 8270E	4-24-20	4-24-20	
Di-n-butylphthalate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Fluoranthene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Pyrene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Butylbenzylphthalate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
bis-2-Ethylhexyladipate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Benzo[a]anthracene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Chrysene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Di-n-octylphthalate	ND	0.20	EPA 8270E	4-24-20	4-24-20	
Benzo[b]fluoranthene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo(j,k)fluoranthene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[a]pyrene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Indeno[1,2,3-cd]pyrene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Dibenz[a,h]anthracene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[g,h,i]perylene	ND	0.0078	EPA 8270E/SIM	4-24-20	4-24-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	56	21 - 107				
Phenol-d6	59	30 - 106				
Nitrobenzene-d5	49	28 - 109				
2-Fluorobiphenyl	71	37 - 107				
2,4,6-Tribromophenol	71	39 - 116				
Terphenyl-d14	78	41 - 113				



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-26-Sand					
Laboratory ID:	04-139-10					
n-Nitrosodimethylamine	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Pyridine	ND	0.36	EPA 8270E	4-24-20	4-24-20	
Phenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Aniline	ND	0.18	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethyl)ether	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Chlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,3-Dichlorobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,4-Dichlorobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Benzyl alcohol	ND	0.18	EPA 8270E	4-24-20	4-24-20	
1,2-Dichlorobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Methylphenol (o-Cresol)	ND	0.036	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroisopropyl)ether	ND	0.036	EPA 8270E	4-24-20	4-24-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.036	EPA 8270E	4-24-20	4-24-20	
n-Nitroso-di-n-propylamine	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Hexachloroethane	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Nitrobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Isophorone	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Nitrophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,4-Dimethylphenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethoxy)methane	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,4-Dichlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,2,4-Trichlorobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Naphthalene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
4-Chloroaniline	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Hexachlorobutadiene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
4-Chloro-3-methylphenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Methylnaphthalene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
1-Methylnaphthalene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Hexachlorocyclopentadiene	ND	0.049	EPA 8270E	4-24-20	4-24-20	
2,4,6-Trichlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,3-Dichloroaniline	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,4,5-Trichlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Chloronaphthalene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2-Nitroaniline	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,4-Dinitrobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Dimethylphthalate	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,3-Dinitrobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,6-Dinitrotoluene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,2-Dinitrobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Acenaphthylene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
3-Nitroaniline	ND	0.036	EPA 8270E	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
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SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-26-Sand					
Laboratory ID:	04-139-10					
2,4-Dinitrophenol	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Acenaphthene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
4-Nitrophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,4-Dinitrotoluene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Dibenzofuran	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,3,5,6-Tetrachlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
2,3,4,6-Tetrachlorophenol	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Diethylphthalate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
4-Chlorophenyl-phenylether	ND	0.036	EPA 8270E	4-24-20	4-24-20	
4-Nitroaniline	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Fluorene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	0.18	EPA 8270E	4-24-20	4-24-20	
n-Nitrosodiphenylamine	ND	0.036	EPA 8270E	4-24-20	4-24-20	
1,2-Diphenylhydrazine	ND	0.036	EPA 8270E	4-24-20	4-24-20	
4-Bromophenyl-phenylether	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Hexachlorobenzene	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Pentachlorophenol	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Phenanthrene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Anthracene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Carbazole	ND	0.036	EPA 8270E	4-24-20	4-24-20	
Di-n-butylphthalate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Fluoranthene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Pyrene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Butylbenzylphthalate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
bis-2-Ethylhexyladipate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
3,3'-Dichlorobenzidine	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Benzo[a]anthracene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Chrysene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
bis(2-Ethylhexyl)phthalate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Di-n-octylphthalate	ND	0.18	EPA 8270E	4-24-20	4-24-20	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[a]pyrene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Indeno[1,2,3-cd]pyrene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270E/SIM	4-24-20	4-24-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	58	21 - 107				
Phenol-d6	64	30 - 106				
Nitrobenzene-d5	53	28 - 109				
2-Fluorobiphenyl	64	37 - 107				
2,4,6-Tribromophenol	91	39 - 116				
Terphenyl-d14	77	41 - 113				



Date of Report: April 29, 2020
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**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0424S2					
n-Nitrosodimethylamine	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Pyridine	ND	0.33	EPA 8270E	4-24-20	4-24-20	
Phenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Aniline	ND	0.17	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Chlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,3-Dichlorobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,4-Dichlorobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Benzyl alcohol	ND	0.17	EPA 8270E	4-24-20	4-24-20	
1,2-Dichlorobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270E	4-24-20	4-24-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270E	4-24-20	4-24-20	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Hexachloroethane	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Nitrobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Isophorone	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Nitrophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,4-Dimethylphenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,4-Dichlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Naphthalene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
4-Chloroaniline	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Hexachlorobutadiene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Hexachlorocyclopentadiene	ND	0.046	EPA 8270E	4-24-20	4-24-20	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,3-Dichloroaniline	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Chloronaphthalene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2-Nitroaniline	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,4-Dinitrobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Dimethylphthalate	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,3-Dinitrobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,6-Dinitrotoluene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,2-Dinitrobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
3-Nitroaniline	ND	0.033	EPA 8270E	4-24-20	4-24-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0424S2					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
4-Nitrophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,4-Dinitrotoluene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Dibenzofuran	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Diethylphthalate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270E	4-24-20	4-24-20	
4-Nitroaniline	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270E	4-24-20	4-24-20	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270E	4-24-20	4-24-20	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270E	4-24-20	4-24-20	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Hexachlorobenzene	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Pentachlorophenol	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Carbazole	ND	0.033	EPA 8270E	4-24-20	4-24-20	
Di-n-butylphthalate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Butylbenzylphthalate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Di-n-octylphthalate	ND	0.17	EPA 8270E	4-24-20	4-24-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	4-24-20	4-24-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	56	21 - 107				
Phenol-d6	66	30 - 106				
Nitrobenzene-d5	56	28 - 109				
2-Fluorobiphenyl	64	37 - 107				
2,4,6-Tribromophenol	78	39 - 116				
Terphenyl-d14	78	41 - 113				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	04-139-08									
	MS	MSD	MS	MSD		MS	MSD			
Phenol	0.883	0.833	1.33	1.33	ND	66	63	30 - 108	6	34
2-Chlorophenol	0.879	0.847	1.33	1.33	ND	66	64	30 - 113	4	38
1,4-Dichlorobenzene	0.372	0.342	0.667	0.667	ND	56	51	24 - 116	8	36
n-Nitroso-di-n-propylamine	0.423	0.393	0.667	0.667	ND	63	59	34 - 112	7	34
1,2,4-Trichlorobenzene	0.442	0.413	0.667	0.667	ND	66	62	34 - 115	7	37
4-Chloro-3-methylphenol	0.936	0.933	1.33	1.33	ND	70	70	41 - 117	0	29
Acenaphthene	0.496	0.478	0.667	0.667	ND	74	72	41 - 111	4	30
4-Nitrophenol	0.859	0.824	1.33	1.33	ND	65	62	30 - 127	4	32
2,4-Dinitrotoluene	0.388	0.324	0.667	0.667	ND	58	49	32 - 114	18	31
Pentachlorophenol	0.969	0.923	1.33	1.33	ND	73	69	36 - 147	5	34
Pyrene	0.563	0.566	0.667	0.667	ND	84	85	33 - 127	1	31
Surrogate:										
2-Fluorophenol						56	57	21 - 107		
Phenol-d6						65	62	30 - 106		
Nitrobenzene-d5						55	55	28 - 109		
2-Fluorobiphenyl						73	77	37 - 107		
2,4,6-Tribromophenol						75	76	39 - 116		
Terphenyl-d14						82	84	41 - 113		



Date of Report: April 29, 2020
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PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		UST-34				
Laboratory ID:	04-139-01					
Aroclor 1016	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.053	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	102	50-153				
Client ID:		UST-33				
Laboratory ID:	04-139-02					
Aroclor 1016	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1221	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1232	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1242	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1248	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1254	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1260	ND	0.30	EPA 8082A	4-23-20	4-29-20	X
Surrogate:	Percent Recovery	Control Limits				
DCB	40	50-153				
Client ID:		UST-32				
Laboratory ID:	04-139-03					
Aroclor 1016	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.051	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	86	50-153				
Q						



Date of Report: April 29, 2020
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PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		UST-30				
Laboratory ID:		04-139-04				
Aroclor 1016	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.061	EPA 8082A	4-23-20	4-23-20	
Surrogate:		Percent Recovery	Control Limits			
DCB		105	50-153			
Client ID:		UST-29				
Laboratory ID:		04-139-05				
Aroclor 1016	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.062	EPA 8082A	4-23-20	4-23-20	
Surrogate:		Percent Recovery	Control Limits			
DCB		86	50-153			
Client ID:		UST-27				
Laboratory ID:		04-139-06				
Aroclor 1016	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.064	EPA 8082A	4-23-20	4-23-20	
Surrogate:		Percent Recovery	Control Limits			
DCB		101	50-153			



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423W1					
Aroclor 1016	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1221	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1232	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1242	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1248	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1254	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Aroclor 1260	ND	0.050	EPA 8082A	4-23-20	4-29-20	X
Surrogate:	Percent Recovery	Control Limits				
DCB	115	50-153				

Laboratory ID:	MB0423W1					
Aroclor 1016	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	112	50-153				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0423W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.528	0.476	0.500	0.500	N/A	106	95	70-129	10	12	
Surrogate:											
DCB						114	93	50-153			



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PCBs EPA 8082A

Matrix: Product
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-21					
Laboratory ID:	04-139-07					
Aroclor 1016	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.99	EPA 8082A	4-23-20	4-23-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>123</i>	<i>67-126</i>				



Date of Report: April 29, 2020
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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Product
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423O2					
Aroclor 1016	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.99	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	120	67-126				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	04-139-07										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	10.2	9.80	9.86	9.94	ND	104	99	50-124	5	15	
Surrogate:											
DCB						124	122	67-126			



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST-31-Sand						
Laboratory ID:	04-139-08					
Aroclor 1016	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.056	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	106	37-122				
Client ID: UST-28-Sand						
Laboratory ID:	04-139-09					
Aroclor 1016	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.059	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	37-122				
Client ID: UST-26-Sand						
Laboratory ID:	04-139-10					
Aroclor 1016	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.054	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	37-122				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0423S1					
Aroclor 1016	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1221	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1232	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1242	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1248	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1254	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Aroclor 1260	ND	0.050	EPA 8082A	4-23-20	4-23-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	107	37-122				

Analyte	Result				Spike Level	Source	Percent	Recovery	RPD		
						Result	Recovery	Limits			
MATRIX SPIKES											
Laboratory ID:	04-139-08										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.463	0.489	0.500	0.500	ND	93	98	38-120	5	15	
Surrogate:											
DCB						106	106	37-122			



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TOTAL METALS
EPA 6010D/7470A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-34					
Laboratory ID:	04-139-01					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	68	50	EPA 6010D	4-24-20	4-28-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-28-20	
Chromium	17	10	EPA 6010D	4-24-20	4-28-20	
Copper	ND	20	EPA 6010D	4-24-20	4-29-20	
Lead	260	100	EPA 6010D	4-24-20	4-28-20	
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	89	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	1200	50	EPA 6010D	4-24-20	4-28-20	

Client ID:	UST-33					
Laboratory ID:	04-139-02					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	36000	1000	EPA 6010D	4-24-20	4-28-20	
Cadmium	39	10	EPA 6010D	4-24-20	4-28-20	
Chromium	1600	10	EPA 6010D	4-24-20	4-28-20	
Copper	3200	20	EPA 6010D	4-24-20	4-28-20	
Lead	6300	100	EPA 6010D	4-24-20	4-28-20	
Mercury	14	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	420	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	6900	50	EPA 6010D	4-24-20	4-28-20	



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**TOTAL METALS
 EPA 6010D /7470A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-32					
Laboratory ID:	04-139-03					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	ND	50	EPA 6010D	4-24-20	4-28-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-28-20	
Chromium	ND	10	EPA 6010D	4-24-20	4-28-20	
Copper	ND	20	EPA 6010D	4-24-20	4-28-20	
Lead	ND	100	EPA 6010D	4-24-20	4-28-20	
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	ND	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	ND	50	EPA 6010D	4-24-20	4-28-20	

Client ID:	UST-30					
Laboratory ID:	04-139-04					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	ND	50	EPA 6010D	4-24-20	4-28-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-28-20	
Chromium	ND	10	EPA 6010D	4-24-20	4-28-20	
Copper	ND	20	EPA 6010D	4-24-20	4-28-20	
Lead	ND	100	EPA 6010D	4-24-20	4-28-20	
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	ND	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	ND	50	EPA 6010D	4-24-20	4-28-20	



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**TOTAL METALS
 EPA 6010D /7470A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-29					
Laboratory ID:	04-139-05					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	170	50	EPA 6010D	4-24-20	4-28-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-28-20	
Chromium	ND	10	EPA 6010D	4-24-20	4-28-20	
Copper	ND	20	EPA 6010D	4-24-20	4-28-20	
Lead	100	100	EPA 6010D	4-24-20	4-28-20	
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	79	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	89	50	EPA 6010D	4-24-20	4-28-20	

Client ID:	UST-27					
Laboratory ID:	04-139-06					
Arsenic	ND	200	EPA 6010D	4-24-20	4-28-20	
Barium	60	50	EPA 6010D	4-24-20	4-28-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-28-20	
Chromium	17	10	EPA 6010D	4-24-20	4-28-20	
Copper	ND	20	EPA 6010D	4-24-20	4-28-20	
Lead	280	100	EPA 6010D	4-24-20	4-28-20	
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-28-20	
Nickel	79	50	EPA 6010D	4-24-20	4-28-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-28-20	
Silver	ND	20	EPA 6010D	4-24-20	4-28-20	
Zinc	240	50	EPA 6010D	4-24-20	4-28-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0424WH1					
Arsenic	ND	200	EPA 6010D	4-24-20	4-27-20	
Barium	ND	50	EPA 6010D	4-24-20	4-27-20	
Cadmium	ND	10	EPA 6010D	4-24-20	4-27-20	
Chromium	ND	10	EPA 6010D	4-24-20	4-27-20	
Copper	ND	20	EPA 6010D	4-24-20	4-27-20	
Lead	ND	100	EPA 6010D	4-24-20	4-27-20	
Molybdenum	ND	100	EPA 6010D	4-24-20	4-27-20	
Nickel	ND	50	EPA 6010D	4-24-20	4-27-20	
Selenium	ND	200	EPA 6010D	4-24-20	4-27-20	
Silver	ND	20	EPA 6010D	4-24-20	4-27-20	
Zinc	ND	50	EPA 6010D	4-24-20	4-27-20	
Laboratory ID:	MB0424W1					
Mercury	ND	0.50	EPA 7470A	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
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DUPLICATE

Laboratory ID: 04-164-02

	ORIG	DUP							
Arsenic	ND	ND	NA	NA	NA	NA	NA	20	
Barium	ND	ND	NA	NA	NA	NA	NA	20	
Cadmium	ND	ND	NA	NA	NA	NA	NA	20	
Chromium	ND	ND	NA	NA	NA	NA	NA	20	
Copper	ND	ND	NA	NA	NA	NA	NA	20	
Lead	ND	ND	NA	NA	NA	NA	NA	20	
Molybdenum	ND	ND	NA	NA	NA	NA	NA	20	
Nickel	ND	ND	NA	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	NA	20	
Zinc	ND	ND	NA	NA	NA	NA	NA	20	

Laboratory ID: 04-139-03

Mercury	ND	ND	NA	NA	NA	NA	NA	20	
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MATRIX SPIKES

Laboratory ID: 04-164-02

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	1980	1940	2000	2000	ND	99	97	75-125	2	20
Barium	2110	2090	2000	2000	ND	106	104	75-125	1	20
Cadmium	964	953	1000	1000	ND	96	95	75-125	1	20
Chromium	2040	2020	2000	2000	ND	102	101	75-125	1	20
Copper	1040	1030	1000	1000	ND	104	103	75-125	1	20
Lead	5050	4980	5000	5000	ND	101	100	75-125	1	20
Molybdenum	1020	1010	1000	1000	ND	102	101	75-125	1	20
Nickel	2000	1980	2000	2000	ND	100	99	75-125	1	20
Selenium	1840	1850	2000	2000	ND	92	93	75-125	1	20
Silver	463	463	500	500	ND	93	93	75-125	0	20
Zinc	2070	2060	2000	2000	ND	104	103	75-125	1	20

Laboratory ID: 04-139-03

Mercury	11.6	11.8	12.5	12.5	ND	92	94	75-125	2	20
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Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST-31-Sand						
Laboratory ID: 04-139-08						
Arsenic	ND	11	EPA 6010D	4-24-20	4-24-20	
Barium	85	2.8	EPA 6010D	4-24-20	4-24-20	
Cadmium	ND	0.56	EPA 6010D	4-24-20	4-24-20	
Chromium	10	0.56	EPA 6010D	4-24-20	4-24-20	
Copper	17	1.1	EPA 6010D	4-24-20	4-24-20	
Lead	ND	5.6	EPA 6010D	4-24-20	4-24-20	
Mercury	ND	0.28	EPA 7471B	4-24-20	4-24-20	
Nickel	13	2.8	EPA 6010D	4-24-20	4-24-20	
Selenium	ND	11	EPA 6010D	4-24-20	4-24-20	
Silver	ND	1.1	EPA 6010D	4-24-20	4-24-20	
Zinc	22	2.8	EPA 6010D	4-24-20	4-24-20	

Client ID: UST-28-Sand						
Laboratory ID: 04-139-09						
Arsenic	ND	12	EPA 6010D	4-24-20	4-24-20	
Barium	74	2.9	EPA 6010D	4-24-20	4-24-20	
Cadmium	ND	0.59	EPA 6010D	4-24-20	4-24-20	
Chromium	14	0.59	EPA 6010D	4-24-20	4-24-20	
Copper	21	1.2	EPA 6010D	4-24-20	4-24-20	
Lead	ND	5.9	EPA 6010D	4-24-20	4-24-20	
Mercury	ND	0.29	EPA 7471B	4-24-20	4-24-20	
Nickel	18	2.9	EPA 6010D	4-24-20	4-24-20	
Selenium	ND	12	EPA 6010D	4-24-20	4-24-20	
Silver	ND	1.2	EPA 6010D	4-24-20	4-24-20	
Zinc	27	2.9	EPA 6010D	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-26-Sand					
Laboratory ID:	04-139-10					
Arsenic	ND	11	EPA 6010D	4-24-20	4-24-20	
Barium	43	2.7	EPA 6010D	4-24-20	4-24-20	
Cadmium	ND	0.54	EPA 6010D	4-24-20	4-24-20	
Chromium	11	0.54	EPA 6010D	4-24-20	4-24-20	
Copper	11	1.1	EPA 6010D	4-24-20	4-24-20	
Lead	ND	5.4	EPA 6010D	4-24-20	4-24-20	
Mercury	ND	0.27	EPA 7471B	4-24-20	4-24-20	
Nickel	15	2.7	EPA 6010D	4-24-20	4-24-20	
Selenium	ND	11	EPA 6010D	4-24-20	4-24-20	
Silver	ND	1.1	EPA 6010D	4-24-20	4-24-20	
Zinc	21	2.7	EPA 6010D	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0424SM1					
Arsenic	ND	10	EPA 6010D	4-24-20	4-24-20	
Barium	ND	2.5	EPA 6010D	4-24-20	4-24-20	
Cadmium	ND	0.50	EPA 6010D	4-24-20	4-24-20	
Chromium	ND	0.50	EPA 6010D	4-24-20	4-24-20	
Copper	ND	1.0	EPA 6010D	4-24-20	4-24-20	
Lead	ND	5.0	EPA 6010D	4-24-20	4-24-20	
Nickel	ND	2.5	EPA 6010D	4-24-20	4-24-20	
Selenium	ND	10	EPA 6010D	4-24-20	4-24-20	
Silver	ND	1.0	EPA 6010D	4-24-20	4-24-20	
Zinc	ND	2.5	EPA 6010D	4-24-20	4-24-20	
Laboratory ID:	MB0424S2					
Mercury	ND	0.25	EPA 7471B	4-24-20	4-24-20	



Date of Report: April 29, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-161-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	50.1	46.2	NA	NA	NA	8	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	25.4	27.0	NA	NA	NA	6	20	
Copper	21.8	21.4	NA	NA	NA	2	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Nickel	35.5	34.0	NA	NA	NA	4	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	36.3	38.0	NA	NA	NA	5	20	

Laboratory ID:	04-161-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	04-161-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	87.0	88.1	100	100	ND	87	88	75-125	1	20
Barium	137	133	100	100	50.1	87	83	75-125	3	20
Cadmium	48.1	47.6	50.0	50.0	ND	96	95	75-125	1	20
Chromium	115	114	100	100	25.4	90	89	75-125	1	20
Copper	66.2	68.4	50.0	50.0	21.8	89	93	75-125	3	20
Lead	218	218	250	250	ND	87	87	75-125	0	20
Nickel	120	120	100	100	35.5	84	84	75-125	0	20
Selenium	87.6	90.7	100	100	ND	88	91	75-125	3	20
Silver	20.6	20.5	25.0	25.0	ND	82	82	75-125	1	20
Zinc	125	127	100	100	36.3	89	91	75-125	1	20

Laboratory ID:	04-161-01									
Mercury	0.554	0.551	0.500	0.500	0.0327	104	104	80-120	1	20



Date of Report: April 29, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139
Project: Star Forge UST Waste Designation

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
UST-31-Sand	04-139-08	11	4-23-20
UST-28-Sand	04-139-09	15	4-23-20
UST-26-Sand	04-139-10	8	4-23-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental

Project Number: _____

Project Name: Star Forge UST Waste Designation

Project Manager: Dave Hill

Sampled by: N. Moxley / B. Johnson

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ 5-day (other)

Laboratory Number: 04-139

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH	NWTPH	NWTPH	NWTPH	Volatiles	Halogenated	EDB/B	Semivolatiles (with low-level PAHs)	PAHs	PCBs	Organochlorine Pesticides	Organophosphorus Pesticides	Chlorinated Acid Herbicides	Total F	Total H	TCLP	HEM (oil and grease)	% Moisture	
1	UST-34	4/21/2020	1150	Water	8					X			X		X				X					
2	UST-33	↓	1210	↓	↓					↓			↓		↓				↓					
3	UST-32		1230	↓	↓					↓			↓		↓				↓					
4	UST-30		1250	↓	↓					↓			↓		↓				↓					
5	UST-29		1320	↓	↓					↓			↓		↓				↓					
6	UST-27	↓	1400	↓	↓					↓			↓		↓				↓					
7	UST-21	↓	1530	Product fuel	2					X					X									
8	UST-31-sand	4/22/2020	0850	Soil	5					X			X		X					X				X
9	UST-28-sand	↓	0920	↓	↓					↓			↓		↓				↓					X
10	UST-26-sand	↓	0955	↓	↓					↓			↓		↓				↓					X

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>DH Environmental</u>	<u>4/22/2020</u>	<u>1230</u>	<u>Data to davehill@dhenviro.com</u> <u>nathan.moxley@dhenviro.com</u>
<u>[Signature]</u>	<u>OSE</u>	<u>4/22/2020</u>	<u>1230</u>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☒ Level III ☐ Level IV ☐		
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐				

Chain of Custody

Company: DH Environmental

Project Number:

Project Name: UST Star Forge Waste Designation

Project Manager: Dave Hill

Sampled by: N. Moxley

**Turnaround Request
(in working days)**

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☐ Standard (7 Days)

☒ 5-day
(other)

Number of Containers

Laboratory Number:

04-139

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix		NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A		% Moisture
11	N. Tanks Slag	4/22/20	1030	Soil	5																		X	
12	S. Tanks Slag	↓	1100	↓	↓																		X	

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>[Signature]</u>	<u>DH Environmental</u>	<u>4/22/2020</u>	<u>1230</u>	
Received	<u>[Signature]</u>	<u>OSE</u>	<u>4/22/20</u>	<u>1230</u>	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard ☐ Level III ☐ Level IV ☐
					Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 5, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Waste Designation
Laboratory Reference No. 2004-139B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on April 22, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 5, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139B
Project: Star Forge UST Waste Designation

Case Narrative

Samples were collected on April 21 and 22, 2020 and received by the laboratory on April 22, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: May 5, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139B
Project: Star Forge UST Waste Designation

TCLP LEAD
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UST-33					
Laboratory ID:	04-139-02					
Lead	ND	0.20	EPA 6010D	5-5-20	5-5-20	



Date of Report: May 5, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139B
 Project: Star Forge UST Waste Designation

**TCLP LEAD
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0505TM1					
Lead	ND	0.20	EPA 6010D	5-5-20	5-5-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-139-02							
	ORIG	DUP						
Lead	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	04-139-02									
	MS	MSD	MS	MSD		MS	MSD			
Lead	9.42	9.51	10.0	10.0	ND	94	95	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental

Project Number: _____

Project Name: Star Forge UST Waste Designation

Project Manager: Dave Hill

Sampled by: N. Moxley / B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ 5-day (other)

Laboratory Number: 04-139

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH	NWTPH	NWTPH	NWTPH	Volatiles	Halogenes	EDB Et	Semivolatiles (with LC)	PAHs	PCBs	Organics	Organics	Chlorine	Total R	Total R	TCLP	HEM (C)	% Moisture
1	UST-34	4/21/2020	1150	Water	8					X			X		X				X				
2	UST-33	↓	1210	↓	↓					↓			↓		↓				↓		(X)		
3	UST-32		1230																				
4	UST-30		1250																				
5	UST-29		1320																				
6	UST-27	↓	1400	↓	↓					↓			↓		↓				↓				
7	UST-21	↓	1530	Product Fuel	2					X					X								
8	UST-31-sand	4/22/2020	0850	Soil	5					X			X		X					X			X
9	UST-28-sand	↓	0920	↓	↓					↓			↓		↓				↓				X
10	UST-26-sand	↓	0955	↓	↓					↓			↓		↓				↓				X

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>DH Environmental</u>	<u>4/22/2020</u>	<u>1230</u>	Data to <u>davehill@dhenviron.com</u> <u>nathan.moxley@dhenviron.com</u> (X) Added 5/1/2020 - 03 (2 day TAT)
<u>[Signature]</u>	<u>OSE</u>	<u>4/22/20</u>	<u>1230</u>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				Data Package: Standard ☒ Level III ☐ Level IV ☐
Received				
Reviewed/Date	Reviewed/Date	Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 2 of 2

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com					
Company: DH Environmental					
Project Number:					
Project Name: USF Star Forge Plank Designation					
Project Manager: Dave Hill					
Sampled by: N. Moxley					
(Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)					
☒ 5-day (other)					
Turnaround Request (in working days)					
Lab ID Sample Identification					
Date Sampled Time Sampled Matrix					
Number of Containers					
NWTPH-HCID					
NWTPH-Gx/BTEX					
NWTPH-Gx					
NWTPH-Dx (☐ Acid / SG Clean-up)					
Volatiles 8260C					
Halogenated Volatiles 8260C					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270D/SIM (with low-level PAHs)					
PAHs 8270D/SIM (low-level)					
PCBs 8082A					
Organochlorine Pesticides 8081B					
Organophosphorus Pesticides 8270D/SIM					
Chlorinated Acid Herbicides 8151A					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664A					
Archive					
% Moisture					
Relinquished					
Received					
Reviewed/Date					
Signature					
Company					
Date					
Time					
Comments/Special Instructions					
Data Package: Standard ☐ Level III ☐ Level IV ☐					
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐					



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 22, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Waste Designation
Laboratory Reference No. 2004-139C

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on April 22, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 22, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139C
Project: Star Forge UST Waste Designation

Case Narrative

Samples were collected on April 21 and 22, 2020 and received by the laboratory on April 22, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The client requested the analysis of samples N. Tanks Slag, and S. Tanks Slag after the holding time had expired.

Semivolatiles EPA 8270E/SIM Analysis

The client requested the analysis of samples N. Tanks Slag, and S. Tanks Slag after the holding time had expired.

Samples N. Tanks Slag, and S. Tanks Slag each had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

The Matrix Spike/ Matrix Spike Duplicate recoveries for Barium and Chromium are outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 98.3% for Barium and 100% for Chromium.

The Matrix Spike/Matrix Spike Duplicate RPD for Chromium is outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

Page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		N. Tanks Slag				
Laboratory ID:		04-139-11				
Dichlorodifluoromethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Chloromethane	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Vinyl Chloride	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Bromomethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Chloroethane	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Trichlorofluoromethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethene	ND	0.00055	EPA 8260D	5-15-20	5-15-20	
Acetone	ND	0.0042	EPA 8260D	5-15-20	5-15-20	
Iodomethane	ND	0.0038	EPA 8260D	5-15-20	5-15-20	
Carbon Disulfide	ND	0.00093	EPA 8260D	5-15-20	5-15-20	
Methylene Chloride	ND	0.0030	EPA 8260D	5-15-20	5-15-20	
(trans) 1,2-Dichloroethene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Methyl t-Butyl Ether	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Vinyl Acetate	ND	0.0028	EPA 8260D	5-15-20	5-15-20	
2,2-Dichloropropane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
(cis) 1,2-Dichloroethene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
2-Butanone	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Bromochloromethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Chloroform	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1,1-Trichloroethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Carbon Tetrachloride	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloropropene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Benzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloroethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Trichloroethene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloropropane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Dibromomethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Bromodichloromethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
2-Chloroethyl Vinyl Ether	ND	0.0033	EPA 8260D	5-15-20	5-15-20	
(cis) 1,3-Dichloropropene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Methyl Isobutyl Ketone	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Toluene	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
(trans) 1,3-Dichloropropene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	N. Tanks Slag					
Laboratory ID:	04-139-11					
1,1,2-Trichloroethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Tetrachloroethene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,3-Dichloropropane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
2-Hexanone	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Dibromochloromethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromoethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Chlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1,1,2-Tetrachloroethane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Ethylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
m,p-Xylene	ND	0.00085	EPA 8260D	5-15-20	5-15-20	
o-Xylene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Styrene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Bromoform	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Isopropylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Bromobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,1,2,2-Tetrachloroethane	ND	0.00055	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichloropropane	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
n-Propylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
2-Chlorotoluene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
4-Chlorotoluene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,3,5-Trimethylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
tert-Butylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trimethylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
sec-Butylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,3-Dichlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
p-Isopropyltoluene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,4-Dichlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2-Dichlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
n-Butylbenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromo-3-chloropropane	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
Naphthalene	ND	0.0021	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichlorobenzene	ND	0.00042	EPA 8260D	5-15-20	5-15-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	89	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

Page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		S. Tanks Slag				
Laboratory ID:		04-139-12				
Dichlorodifluoromethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Chloromethane	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Vinyl Chloride	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Bromomethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Chloroethane	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Trichlorofluoromethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethene	ND	0.00067	EPA 8260D	5-15-20	5-15-20	
Acetone	ND	0.0051	EPA 8260D	5-15-20	5-15-20	
Iodomethane	ND	0.0046	EPA 8260D	5-15-20	5-15-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	5-15-20	5-15-20	
Methylene Chloride	ND	0.0036	EPA 8260D	5-15-20	5-15-20	
(trans) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Methyl t-Butyl Ether	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Vinyl Acetate	ND	0.0034	EPA 8260D	5-15-20	5-15-20	
2,2-Dichloropropane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
(cis) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
2-Butanone	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Bromochloromethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Chloroform	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1,1-Trichloroethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Carbon Tetrachloride	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloropropene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Benzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloroethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Trichloroethene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloropropane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Dibromomethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Bromodichloromethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260D	5-15-20	5-15-20	
(cis) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Methyl Isobutyl Ketone	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Toluene	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
(trans) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	



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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

VOLATILE ORGANICS EPA 8260D

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	S. Tanks Slag					
Laboratory ID:	04-139-12					
1,1,2-Trichloroethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Tetrachloroethene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,3-Dichloropropane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
2-Hexanone	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Dibromochloromethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromoethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Chlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1,1,2-Tetrachloroethane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Ethylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
m,p-Xylene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
o-Xylene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Styrene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Bromoform	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Isopropylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Bromobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,1,2,2-Tetrachloroethane	ND	0.00067	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichloropropane	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
n-Propylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
2-Chlorotoluene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
4-Chlorotoluene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,3,5-Trimethylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
tert-Butylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trimethylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
sec-Butylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,3-Dichlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
p-Isopropyltoluene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,4-Dichlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2-Dichlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
n-Butylbenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromo-3-chloropropane	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
Naphthalene	ND	0.0026	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichlorobenzene	ND	0.00051	EPA 8260D	5-15-20	5-15-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	74-131				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	92	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Chloromethane	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Bromomethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Chloroethane	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethene	ND	0.0013	EPA 8260D	5-15-20	5-15-20	
Acetone	ND	0.010	EPA 8260D	5-15-20	5-15-20	
Iodomethane	ND	0.0089	EPA 8260D	5-15-20	5-15-20	
Carbon Disulfide	ND	0.0022	EPA 8260D	5-15-20	5-15-20	
Methylene Chloride	ND	0.0071	EPA 8260D	5-15-20	5-15-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Vinyl Acetate	ND	0.0067	EPA 8260D	5-15-20	5-15-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
2-Butanone	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Bromochloromethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Chloroform	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Benzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Trichloroethene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Dibromomethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
2-Chloroethyl Vinyl Ether	ND	0.0077	EPA 8260D	5-15-20	5-15-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Toluene	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	



Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
2-Hexanone	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Chlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Ethylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
m,p-Xylene	ND	0.0020	EPA 8260D	5-15-20	5-15-20	
o-Xylene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Styrene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Bromoform	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Bromobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
Naphthalene	ND	0.0050	EPA 8260D	5-15-20	5-15-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	5-15-20	5-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>92</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0515S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0393	0.0393	0.0500	0.0500	79	79	55-126	0	18	
Benzene	0.0439	0.0439	0.0500	0.0500	88	88	65-121	0	16	
Trichloroethene	0.0517	0.0518	0.0500	0.0500	103	104	74-126	0	16	
Toluene	0.0496	0.0496	0.0500	0.0500	99	99	71-121	0	15	
Chlorobenzene	0.0502	0.0507	0.0500	0.0500	100	101	72-123	1	14	
Surrogate:										
Dibromofluoromethane					93	91	74-131			
Toluene-d8					98	97	78-128			
4-Bromofluorobenzene					95	96	71-130			



Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM

Page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	N. Tanks Slag					
Laboratory ID:	04-139-11					
n-Nitrosodimethylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Pyridine	ND	0.46	EPA 8270E	5-15-20	5-15-20	
Phenol	0.081	0.034	EPA 8270E	5-15-20	5-15-20	
Aniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethyl)ether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Chlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,3-Dichlorobenzene	0.053	0.034	EPA 8270E	5-15-20	5-15-20	
1,4-Dichlorobenzene	0.040	0.034	EPA 8270E	5-15-20	5-15-20	
Benzyl alcohol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
1,2-Dichlorobenzene	0.044	0.034	EPA 8270E	5-15-20	5-15-20	
2-Methylphenol (o-Cresol)	ND	0.034	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroisopropyl)ether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.034	EPA 8270E	5-15-20	5-15-20	
n-Nitroso-di-n-propylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Hexachloroethane	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Nitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Isophorone	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Nitrophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dimethylphenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethoxy)methane	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Naphthalene	0.051	0.034	EPA 8270E	5-15-20	5-15-20	
4-Chloroaniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Chloro-3-methylphenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Methylnaphthalene	0.024	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
1-Methylnaphthalene	0.018	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Hexachlorocyclopentadiene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4,6-Trichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3-Dichloroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4,5-Trichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Chloronaphthalene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,4-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Dimethylphthalate	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,3-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,6-Dinitrotoluene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
3-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	



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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Slag						
Laboratory ID: 04-139-11						
2,4-Dinitrophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
4-Nitrophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dinitrotoluene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Dibenzofuran	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3,5,6-Tetrachlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3,4,6-Tetrachlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Diethylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
4-Chlorophenyl-phenylether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
n-Nitrosodiphenylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2-Diphenylhydrazine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Bromophenyl-phenylether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Hexachlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Pentachlorophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Phenanthrene	0.028	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Carbazole	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Di-n-butylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Fluoranthene	0.036	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Pyrene	0.026	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Butylbenzylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[a]anthracene	0.010	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Chrysene	0.031	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Di-n-octylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[b]fluoranthene	0.030	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[j,k]fluoranthene	0.0085	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[a]pyrene	0.014	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Indeno[1,2,3-cd]pyrene	0.015	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[g,h,i]perylene	0.016	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	48	22 - 109				
Phenol-d6	26	36 - 110				
Nitrobenzene-d5	45	31 - 109				
2-Fluorobiphenyl	74	45 - 107				
2,4,6-Tribromophenol	51	43 - 124				
Terphenyl-d14	52	52 - 118				



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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM

Page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	S. Tanks Slag					
Laboratory ID:	04-139-12					
n-Nitrosodimethylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Pyridine	ND	0.46	EPA 8270E	5-15-20	5-15-20	
Phenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Aniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethyl)ether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Chlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,3-Dichlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,4-Dichlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Benzyl alcohol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
1,2-Dichlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Methylphenol (o-Cresol)	ND	0.034	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroisopropyl)ether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.034	EPA 8270E	5-15-20	5-15-20	
n-Nitroso-di-n-propylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Hexachloroethane	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Nitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Isophorone	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Nitrophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dimethylphenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethoxy)methane	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Naphthalene	0.017	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
4-Chloroaniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Chloro-3-methylphenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Methylnaphthalene	0.0091	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
1-Methylnaphthalene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Hexachlorocyclopentadiene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4,6-Trichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3-Dichloroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4,5-Trichlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Chloronaphthalene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,4-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Dimethylphthalate	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,3-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,6-Dinitrotoluene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2-Dinitrobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Acenaphthylene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
3-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	



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Date of Report: May 22, 2020
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 Project: Star Forge UST Waste Designation

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	S. Tanks Slag					
Laboratory ID:	04-139-12					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Acenaphthene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
4-Nitrophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,4-Dinitrotoluene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Dibenzofuran	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3,5,6-Tetrachlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
2,3,4,6-Tetrachlorophenol	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Diethylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
4-Chlorophenyl-phenylether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Nitroaniline	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Fluorene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
n-Nitrosodiphenylamine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
1,2-Diphenylhydrazine	ND	0.034	EPA 8270E	5-15-20	5-15-20	
4-Bromophenyl-phenylether	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Hexachlorobenzene	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Pentachlorophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Phenanthrene	0.029	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Anthracene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Carbazole	ND	0.034	EPA 8270E	5-15-20	5-15-20	
Di-n-butylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Fluoranthene	0.034	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Pyrene	0.027	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Butylbenzylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[a]anthracene	0.010	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Chrysene	0.024	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Di-n-octylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[b]fluoranthene	0.025	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[j,k]fluoranthene	0.0075	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[a]pyrene	0.011	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Indeno[1,2,3-cd]pyrene	0.013	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Dibenz[a,h]anthracene	ND	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[g,h,i]perylene	0.014	0.0068	EPA 8270E/SIM	5-15-20	5-15-20	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	32	22 - 109				
Phenol-d6	32	36 - 110				
Nitrobenzene-d5	43	31 - 109				
2-Fluorobiphenyl	63	45 - 107				
2,4,6-Tribromophenol	47	43 - 124				
Terphenyl-d14	65	52 - 118				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Pyridine	ND	0.45	EPA 8270E	5-15-20	5-15-20	
Phenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Aniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Chlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,3-Dichlorobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,4-Dichlorobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Benzyl alcohol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
1,2-Dichlorobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270E	5-15-20	5-15-20	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270E	5-15-20	5-15-20	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Hexachloroethane	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Nitrobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Isophorone	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Nitrophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,4-Dimethylphenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,4-Dichlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
4-Chloroaniline	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Hexachlorobutadiene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,3-Dichloroaniline	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Chloronaphthalene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2-Nitroaniline	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,4-Dinitrobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Dimethylphthalate	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,3-Dinitrobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,6-Dinitrotoluene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,2-Dinitrobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
3-Nitroaniline	ND	0.033	EPA 8270E	5-15-20	5-15-20	



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Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
4-Nitrophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,4-Dinitrotoluene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Dibenzofuran	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Diethylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270E	5-15-20	5-15-20	
4-Nitroaniline	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270E	5-15-20	5-15-20	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270E	5-15-20	5-15-20	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Hexachlorobenzene	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Pentachlorophenol	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Carbazole	ND	0.033	EPA 8270E	5-15-20	5-15-20	
Di-n-butylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Butylbenzylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Di-n-octylphthalate	ND	0.17	EPA 8270E	5-15-20	5-15-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	5-15-20	5-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	82	22 - 109				
Phenol-d6	89	36 - 110				
Nitrobenzene-d5	81	31 - 109				
2-Fluorobiphenyl	84	45 - 107				
2,4,6-Tribromophenol	89	43 - 124				
Terphenyl-d14	83	52 - 118				



Date of Report: May 22, 2020
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 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0515S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	1.11	1.05	1.33	1.33	83	79	47 - 104	6	30	
2-Chlorophenol	1.18	1.13	1.33	1.33	89	85	45 - 108	4	31	
1,4-Dichlorobenzene	0.588	0.556	0.667	0.667	88	83	41 - 105	6	32	
n-Nitroso-di-n-propylamine	0.588	0.561	0.667	0.667	88	84	47 - 103	5	28	
1,2,4-Trichlorobenzene	0.588	0.556	0.667	0.667	88	83	42 - 111	6	32	
4-Chloro-3-methylphenol	1.21	1.16	1.33	1.33	91	87	61 - 108	4	25	
Acenaphthene	0.572	0.545	0.667	0.667	86	82	54 - 102	5	23	
4-Nitrophenol	1.13	1.10	1.33	1.33	85	83	53 - 122	3	24	
2,4-Dinitrotoluene	0.542	0.537	0.667	0.667	81	81	57 - 107	1	22	
Pentachlorophenol	0.636	0.654	1.33	1.33	48	49	44 - 132	3	23	
Pyrene	0.589	0.599	0.667	0.667	88	90	58 - 111	2	21	
Surrogate:										
2-Fluorophenol					86	81	22 - 109			
Phenol-d6					100	94	36 - 110			
Nitrobenzene-d5					88	83	31 - 109			
2-Fluorobiphenyl					90	88	45 - 107			
2,4,6-Tribromophenol					98	94	43 - 124			
Terphenyl-d14					90	92	52 - 118			



Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
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 Project: Star Forge UST Waste Designation

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Slag						
Laboratory ID: 04-139-11						
Aroclor 1016	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1254	0.10	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-15-20	5-18-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 122 46-125</i>						

Client ID: S. Tanks Slag						
Laboratory ID: 04-139-12						
Aroclor 1016	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1221	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1232	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1242	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1248	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1254	ND	0.051	EPA 8082A	5-15-20	5-19-20	
Aroclor 1260	ND	0.051	EPA 8082A	5-15-20	5-19-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 121 46-125</i>						



Date of Report: May 22, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
Aroclor 1016	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1221	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1232	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1242	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1248	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1254	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Aroclor 1260	ND	0.050	EPA 8082A	5-15-20	5-18-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	104	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-069-03										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.522	0.528	0.500	0.500	ND	104	106	43-125	1	15	
Surrogate:											
DCB						110	115	46-125			



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 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		N. Tanks Slag				
Laboratory ID:		04-139-11				
Arsenic	79	10	EPA 6010D	5-18-20	5-18-20	
Barium	31	2.5	EPA 6010D	5-18-20	5-18-20	
Cadmium	ND	0.50	EPA 6010D	5-18-20	5-18-20	
Chromium	3900	10	EPA 6010D	5-18-20	5-18-20	
Copper	1200	20	EPA 6010D	5-18-20	5-18-20	
Lead	70	5.0	EPA 6010D	5-18-20	5-18-20	
Mercury	ND	0.25	EPA 7471B	5-15-20	5-15-20	
Nickel	7900	50	EPA 6010D	5-18-20	5-18-20	
Selenium	ND	10	EPA 6010D	5-18-20	5-18-20	
Silver	ND	1.0	EPA 6010D	5-18-20	5-18-20	
Zinc	170	2.5	EPA 6010D	5-18-20	5-18-20	

Client ID:		S. Tanks Slag				
Laboratory ID:		04-139-12				
Arsenic	100	10	EPA 6010D	5-18-20	5-18-20	
Barium	19	2.5	EPA 6010D	5-18-20	5-18-20	
Cadmium	ND	0.51	EPA 6010D	5-18-20	5-18-20	
Chromium	3900	10	EPA 6010D	5-18-20	5-18-20	
Copper	1600	20	EPA 6010D	5-18-20	5-18-20	
Lead	64	5.1	EPA 6010D	5-18-20	5-18-20	
Mercury	ND	0.25	EPA 7471B	5-15-20	5-15-20	
Nickel	4900	51	EPA 6010D	5-18-20	5-18-20	
Selenium	ND	10	EPA 6010D	5-18-20	5-18-20	
Silver	ND	1.0	EPA 6010D	5-18-20	5-18-20	
Zinc	96	2.5	EPA 6010D	5-18-20	5-18-20	



Date of Report: May 22, 2020
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 Laboratory Reference: 2004-139C
 Project: Star Forge UST Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0518SH1					
Arsenic	ND	10	EPA 6010D	5-18-20	5-18-20	
Barium	ND	2.5	EPA 6010D	5-18-20	5-18-20	
Cadmium	ND	0.50	EPA 6010D	5-18-20	5-18-20	
Chromium	ND	0.50	EPA 6010D	5-18-20	5-18-20	
Copper	ND	1.0	EPA 6010D	5-18-20	5-18-20	
Lead	ND	5.0	EPA 6010D	5-18-20	5-18-20	
Nickel	ND	2.5	EPA 6010D	5-18-20	5-18-20	
Selenium	ND	10	EPA 6010D	5-18-20	5-18-20	
Silver	ND	1.0	EPA 6010D	5-18-20	5-18-20	
Zinc	ND	2.5	EPA 6010D	5-18-20	5-18-20	
Laboratory ID:	MB0515S1					
Mercury	ND	0.25	EPA 7471B	5-15-20	5-15-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-115-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	81.9	73.3	NA	NA	NA	11	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	207	153	NA	NA	NA	30	20	K
Copper	39.7	40.9	NA	NA	NA	3	20	
Lead	ND	6.45	NA	NA	NA	NA	20	
Nickel	23.0	22.9	NA	NA	NA	0	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	49.7	48.0	NA	NA	NA	3	20	

Laboratory ID:	04-139-11							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	05-115-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	94.5	92.6	100	100	ND	95	93	75-125	2	20
Barium	152	148	100	100	81.9	70	66	75-125	2	20
Cadmium	47.5	47.7	50.0	50.0	ND	95	95	75-125	0	20
Chromium	313	222	100	100	207	106	15	75-125	34	20
Copper	87.2	81.4	50.0	50.0	39.7	95	83	75-125	7	20
Lead	227	227	250	250	ND	91	91	75-125	0	20
Nickel	112	110	100	100	23.0	89	87	75-125	2	20
Selenium	93.4	93.0	100	100	ND	93	93	75-125	0	20
Silver	22.4	22.4	25.0	25.0	ND	90	89	75-125	0	20
Zinc	145	138	100	100	49.7	95	89	75-125	4	20

Laboratory ID:	04-139-11									
Mercury	0.513	0.444	0.500	0.500	0.0214	98	85	80-120	14	20



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
N. Tanks Slag	04-139-11	1	5-15-20
S. Tanks Slag	04-139-12	1	5-15-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental
Project Number: _____
Project Name: Star Forge UST Waste Designation
Project Manager: Dave Hill
Sampled by: N. Moxley / B. Johnson

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)

☒ 5-day (other)

Laboratory Number: 04 - 139																									
Number of Containers					NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals <i>+ Cu, Ni, Zn, Mo</i>	Total MPCA RCRA Metals <i>+ Cu, Ni, Zn</i>	TCLP Metals LEAD ONLY	HEM (oil and grease) 1664A			% Moisture	
8									X			X		X				X							

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>DH Environmental</u>	4/22/2020	1230	Data to <u>davehill@dhenviro.com</u> <u>nathan.moxley@dhenviro.com</u> (X) Added 5/1/2020 - 03 (2 day TAT) O Added 5/15/20 <u>RC</u> <u>5 day TA</u> Data Package: Standard ☒ Level III ☐ Level IV ☐ Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐
Received	<u>OSE</u>	4/22/20	1230	
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date			

Page 2 of 2

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ 5-day
(other)

Laboratory Number:					
	NWTPH-HCID				
	NWTPH-Gx/BTEX				
	NWTPH-Gx				
	NWTPH-Dx (☐ Acid / SG Clean-up)				
	Volatiles 8260C	O	O		
	Halogenated Volatiles 8260C				
	EDB EPA 8011 (Waters Only)				
	Semivolatiles 8270D/SIM (with low-level PAHs)	O	O		
	PAHs 8270D/SIM (low-level)				
	PCBs 8082A	O	O		
	Organochlorine Pesticides 8081B				
	Organophosphorus Pesticides 8270D/SIM				
	Chlorinated Acid Herbicides 8151A				
	Total RCRA Metals + Cu, Pb, Zn	O	O		
	Total MTCA Metals				
	TCLP Metals				
	HEM (oil and grease) 1664A	X	X		
	Archive				
	% Moisture	O	O		

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		DE Environmental	4/22/2020	1230	
Received		OSE	4/22/20	1230	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard ☐ Level III ☐ Level IV ☐
					Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 28, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Waste Designation
Laboratory Reference No. 2004-139D

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on April 22, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 28, 2020
Samples Submitted: April 22, 2020
Laboratory Reference: 2004-139D
Project: Star Forge UST Waste Designation

Case Narrative

Samples were collected on April 21 and 22, 2020 and received by the laboratory on April 22, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: May 28, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139D
 Project: Star Forge UST Waste Designation

TCLP METALS
EPA 1311/6010D

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	N. Tanks Slag					
Laboratory ID:	04-139-11					
Chromium	0.023	0.020	EPA 6010D	5-27-20	5-27-20	

Client ID:	S. Tanks Slag					
Laboratory ID:	04-139-12					
Arsenic	ND	0.40	EPA 6010D	5-27-20	5-27-20	
Chromium	ND	0.020	EPA 6010D	5-27-20	5-27-20	



Date of Report: May 28, 2020
 Samples Submitted: April 22, 2020
 Laboratory Reference: 2004-139D
 Project: Star Forge UST Waste Designation

**TCLP METALS
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract

Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527TM1					
Arsenic	ND	0.40	EPA 6010D	5-27-20	5-27-20	
Chromium	ND	0.020	EPA 6010D	5-27-20	5-27-20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-174-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Chromium	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	05-174-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.65	3.60	4.00	4.00	ND	91	90	75-125	1	20
Chromium	3.98	3.98	4.00	4.00	ND	99	99	75-125	0	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





ANALYTICAL LABORATORY TESTING
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 2

CIVIL-ENGINEERING INC.						
Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com						
Company: DH Environmental						
Project Number:			(Check One)			
Project Name: Star Forge UST Waste Designation			☐ Same Day ☐ 1 Day			
Project Manager: Dave Hill			☒ 2 Days ☐ 3 Days			
Sampled by: N. Moxley / B. Johnson			☐ Standard (7 Days)			
Turnaround Request (In working days) X 5-day (other)						
Lab ID			Date Sampled	Time Sampled	Matrix	Number of Containers
1	UST-34	4/22/2020	1150	Water	8	NWTPH-HCID
2	UST-33		1210			NWTPH-Gx/BTEX
3	UST-32		1230			NWTPH-Gx
4	UST-30		1250			NWTPH-Dx (☐ Acid / SG Clean-up)
5	UST-29		1320			Volatiles 8260C
6	UST-27		1400			Halogenated Volatiles 8260C
7	UST-21		1530			EDB EPA 8011 (Waters Only)
8	UST-31-Sand	4/22/2020	0850	Soil	5	Semivolatiles 8270D/SIM (with low-level PAHs)
9	UST-28-sand		0920			PAHs 8270D/SIM (low-level)
10	UST-26-sand		0955			PCBs 8082A
Signature			Company	Date	Time	Comments/Special Instructions
Relinquished			DH Environmental	4/22/2020	1230	Data to davehill@dhenviro.com
Received			OSE	4/22/2020	1030	nathan.moxley@dhenviro.com
Relinquished						
Received						
Relinquished						
Received						
Reviewed/Date			Data Package: Standard ☒ Level III ☐ Level IV ☐			
Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐			



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Chain of Custody

Page 2 of 2

[illegible]



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 8, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Waste Designation
Laboratory Reference No. 2004-139E

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on April 22, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID: N. Tanks Slag; S. Tanks Slag

Report date: June 8, 2020

Submitted to:

OnSite Environmental
14648 NE 95th Street
Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on two samples submitted by Onsite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The samples, identified as N. Tanks Slag and S. Tanks Slag were received in the laboratory on June 2, 2020. Upon arrival at the laboratory the samples were inspected and contents verified against information provided on the chain-of-custody form. The samples were stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test numbers	2006-001; 2006-002
Sample ID's	N. Tanks Slag; S. Tanks Slag
Test initiation date; time	6/4/2020; 0900h
Test termination date; time	6/8/2020; 0945h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The samples were tested using fish received on April 22, 2020.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	46 days post swim-up (hatch date 4/1/2020)
Mean weight	0.33 g
Mean length	33 mm
Ratio of longest to shortest	1.2
Loading	0.55 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on samples N. Tanks Slag and S. Tanks Slag are contained in Table 3. There was no mortality during the tests. Based on these results, the samples do not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
N. Tanks Slag	10	30	0	None
	100	30	0	
S. Tanks Slag	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated June 4, 2020. The LC₅₀ of 138 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 29.8 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2009. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised June 2009.

Appendix A
***Oncorhynchus mykiss* Dangerous Waste Toxicity Test**
Raw Bench Sheets

Dangerous Waste Toxicity Test

Start Date & Time: 6/4/2020 0900

End Date & Time: 6/8/2020 0945

Test Organism: Oncorhynchus mykiss

Test Protocol: Washington State Department of Ecology Publ. 80-12

Rep	Conc.	Cont #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH (units)					Conductivity (umhos/cm)					Temperature (°C)					Percent Survival					
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96											
1	COLD	87	10	10	10	10	10	8.9	8.5	8.1	7.8	7.5	7.9	7.6	7.9	7.7	7.5	7.9	7.6	7.9	7.7	7.5	7.9	7.6	7.9	7.7	7.5	392	12.3	12.1	11.7	12.3	12.0
2		8	10	10	10	10	10	9.0	8.7	8.3	8.1	8.0	7.9	7.9	7.7	7.5	7.9	7.6	7.9	7.7	7.5	7.9	7.6	7.9	7.7	7.5	300						
3		32	10	10	10	10	10	7.1	8.3	8.4	8.3	7.8	7.7	7.6	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	397						
1	10PPM	81	10	10	10	10	10	8.8	8.4	8.1	7.9	7.5	7.7	7.6	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	395	12.4	11.5	11.8	12.2	11.5	
2	N-TALKS	7	10	10	10	10	10	8.7	8.2	8.1	8.0	7.8	7.7	7.6	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	300						
3	730-652	19	10	10	10	10	10	8.7	8.3	8.0	7.7	7.4	7.7	7.6	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	394						
1	100PPM	15	10	10	10	10	10	8.9	8.4	8.2	8.1	8.0	7.7	7.6	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	391	12.1	11.7	12.1	12.2	12.1	
2	N-TALKS	5	10	10	10	10	10	8.9	8.5	7.9	7.6	7.4	7.6	7.6	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	397						
3	730-652	33	10	10	10	10	10	9.0	8.7	8.4	8.1	8.0	7.8	7.9	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	395						
1	10PPM	13	10	10	10	10	10	9.1	8.2	8.0	7.8	7.5	7.6	7.6	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	392	12.1	11.8	12.0	12.1	11.7	
2	S-TALKS	17	10	10	10	10	10	9.0	8.4	8.1	7.9	7.6	7.7	7.7	7.5	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	396						
3	730-652	4	10	10	10	10	10	9.2	8.5	8.3	8.0	7.8	7.7	7.7	7.5	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	300						
1	100PPM	11	10	10	10	10	10	9.0	8.5	8.2	8.0	7.9	7.7	7.6	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	399	12.4	11.3	12.0	12.2	11.7	
2	S-TALKS	3	10	10	10	10	10	9.1	8.7	8.4	8.1	8.0	7.8	7.9	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	394						
3	730-652	36	10	10	10	10	10	9.0	8.6	8.1	7.9	7.6	7.7	7.6	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	397						
1																																	
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3																																	
1	Technician Initials	27	28	24	24	25	25	22	25	24	22	25																					

QA Check 25

Chlorine	(mg/L Cl ₂)	40.03
Weights (g):		
Lengths(mm)		
Length max		

Test Volume: 50L
Date of Hatch: 4/1/20
Date of Swim up: 4/19/20

Rainier Environmental
Washington Laboratory
5013 Pacific HWY E Suite 200

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

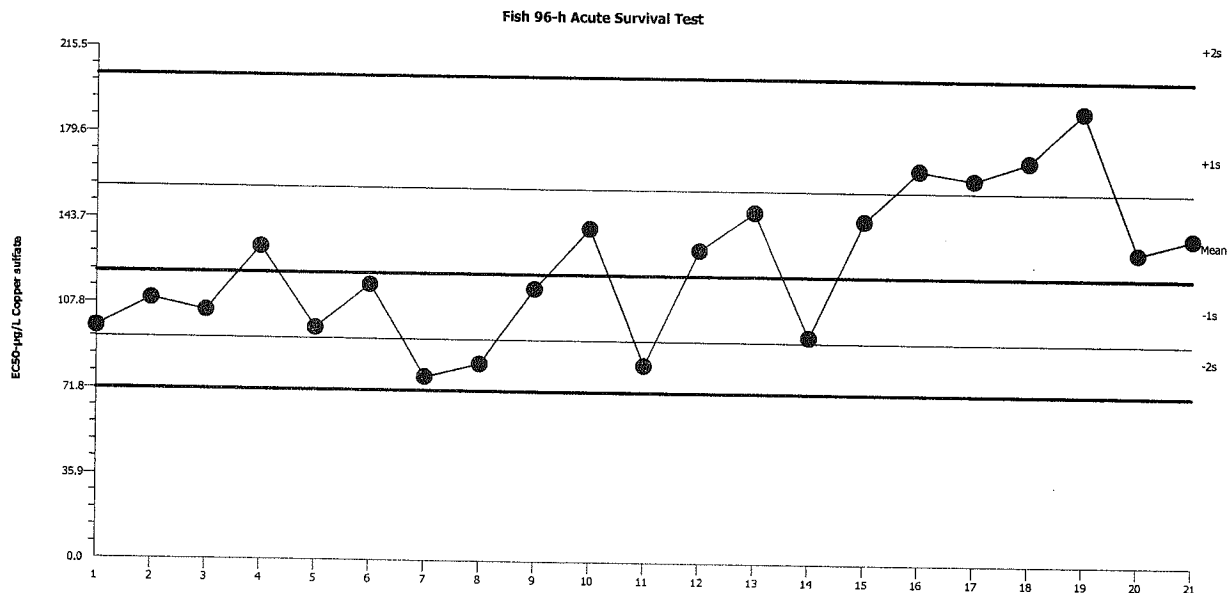
Organism: Oncorhynchus mykiss (Rainbow Tro

Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF



Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2018	Aug	30	97.72	-23.31	-0.8203			01-6631-0399	00-2872-0274
2		Oct	5	109.7	-11.34	-0.3773			09-8718-1650	14-5303-2875
3		Nov	6	104.7	-16.3	-0.5545			20-5282-8357	01-3690-0719
4		Dec	5	132	10.93	0.3314			01-4499-1094	07-5652-1457
5	2019	Jan	7	97.72	-23.31	-0.8203			03-9395-5944	09-6087-0434
6		Feb	9	116.1	-4.882	-0.1579			13-6349-4914	05-5573-8325
7		Mar	12	77.56	-43.47	-1.706	(-)		03-9582-1391	08-0363-8342
8		Apr	19	83.12	-37.9	-1.44	(-)		16-0727-4914	09-8538-6220
9		May	21	114.9	-6.156	-0.2002			13-0213-5670	12-8044-7071
10		Jun	21	140.6	19.61	0.5759			18-7198-9789	02-0902-1290
11		Jul	23	83.12	-37.9	-1.44	(-)		09-5504-5129	09-5466-8341
12		Aug	23	132	10.93	0.3314			06-2129-4986	03-1480-8200
13		Sep	20	148.1	27.08	0.7744			14-9775-6582	02-8526-9159
14		Oct	22	95.48	-25.54	-0.9089			08-2604-9852	04-5996-4554
15		Nov	25	144.7	23.7	0.6858			19-0900-7567	17-7816-6246
16		Dec	26	166.2	45.22	1.217	(+)		18-0718-4325	01-1522-2292
17	2020	Jan	27	162.5	41.43	1.129	(+)		15-7428-0290	09-7189-2054
18		Feb	28	170.1	49.11	1.306	(+)		09-4267-7927	12-7910-1452
19		Apr	1	191	69.94	1.749	(+)		13-6543-5000	21-3363-8866
20		May	1	132	10.93	0.3314			05-3085-5611	09-0915-7454
21		Jun	4	138.2	17.17	0.5086			02-5099-4531	13-4027-8146

CETIS Summary Report

Report Date: 08 Jun-20 12:43 (p 1 of 1)
Test Code: RA060420OM | 02-5099-4531

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	00-5413-6128	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	04 Jun-20 11:15	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	08 Jun-20 12:00	Species:	Oncorhynchus mykiss	Brine:	
Duration:	4d 1h	Source:	Trout Lodge Fish Farm	Age:	46d
Sample ID:	19-4490-5545	Code:	RA060420OM	Client:	Internal Lab
Sample Date:	04 Jun-20	Material:	Copper sulfate	Project:	
Receive Date:	04 Jun-20	Source:	Reference Toxicant		
Sample Age:	11h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-4329-7482	96h Survival Rate	50	100	70.71	15.5%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
13-4027-8146	96h Survival Rate	LC50	138.2	119.3	160.1		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.7667	0.7451	0.7882	0.7	0.8	0.03333	0.05774	7.53%	23.33%
200		3	0.2	0.1253	0.2747	0	0.4	0.1155	0.2	100.0%	80.0%
400		3	0	0	0	0	0	0	0	100.0%	100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.7	0.8	0.8
200		0.4	0.2	0
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		7/10	8/10	8/10
200		4/10	2/10	0/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



Laboratory Reference #: 04-139

Turnaround Request

1 Day 2 Day 3 Day

Standard

Other: neck

email: dbaumeister@onsite-env.com

Project Number: Star Forge UST Waste Designation

Project Name:

[illegible]



Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.on-site-env.com

Chain of Custody

Page 1 of 2

Company: DH Environmental				Turnaround Request (In working days)		Laboratory Number: 04-139											
Project Number:				(Check One)													
Project Name: Star Forge UST Waste Designation				☐ Same Day ☐ 1 Day													
Project Manager: Dave Hill				☐ 2 Days ☐ 3 Days													
Sampled by: N. Moxley / B. Johnson				☒ 5-day (other)													
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers												
1	UST-34	4/22/2020	1150	Water	8												
2	UST-33		1210														
3	UST-32		1230														
4	UST-30		1250														
5	UST-29		1320														
6	UST-27		1400														
7	UST-21		1530	Product Fuel	2												
8	UST-31-Sand	4/22/2020	0850	Soil	5												
9	UST-28-Sand		0920														
10	UST-26-Sand		0955														
Signature		Company		Date		Time		Comments/Special Instructions									
		DH Environmental		4/22/2020		1230		Data to Dave Hill @ dhenviron.com Nathan.moxley @ dhenviron.com									
Relinquished		DH Environmental		4/22/2020		1030		Data Package: Standard ☒ Level III ☐ Level IV ☐									
Received		DH Environmental		4/22/2020		1030		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐									
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											
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Received		DH Environmental		4/22/2020		1030											
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Relinquished		DH Environmental		4/22/2020		1030											
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Relinquished		DH Environmental		4/22/2020		1030											
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Received		DH Environmental		4/22/2020		1030											
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											
Relinquished		DH Environmental		4/22/2020		1030											
Received		DH Environmental		4/22/2020		1030											



Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
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Chain of Custody

Page 2 of 2

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com			Turnaround Request (in working days)			Laboratory Number: 04-139															
Company: DH Environmental			☐ Same Day ☐ 1 Day																		
Project Number:			☐ 2 Days ☐ 3 Days																		
Project Name: USF Star Forge Waste Disposition			☐ Standard (7 Days)																		
Project Manager: Dave Hill																					
Sampled by: N. Maxley			☒ 5-day (other)																		
Lab ID			Date Sampled			Time Sampled			Matrix			Number of Containers									
11 N. Tanks Slag			4/22/20			1030			Soil			NWTPH-HCID									
12 S. Tanks Slag			↓			1100			↓			NWTPH-Gx/BTEX									
												NWTPH-Gx									
												NWTPH-Dx (☐ Acid / SG Clean-up)									
												Volatiles 8260C									
												Halogenated Volatiles 8260C									
												EDB EPA 8011 (Waters Only)									
												Semivolatiles 8270D/SIM (with low-level PAHs)									
												PAHs 8270D/SIM (low-level)									
												PCBs 8082A									
												Organochlorine Pesticides 8081B									
												Organophosphorus Pesticides 8270D/SIM									
												Chlorinated Acid Herbicides 8151A									
												Total RCRA Metals + Cu, Ni, Zn									
												Total MTCA Metals									
												TCLP Metals Cr									
												HEM (oil and grease) 16644									
												TCLP Cr, As									
												Archive									
												Fish Bioassay									
												% Moisture									
Signature			Company			Date			Time			Comments/Special Instructions									
Relinquished			DH Environmental			4/22/2020			1230			⊕									
Received			DH Environmental			4/22/20			1230												
Relinquished																					
Received																					
Relinquished												Data Package: Standard ☐ Level III ☐ Level IV ☐									
Received																					
Relinquished																					
Received																					
Reviewed/Date			Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐															

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 29, 2019

Corey League, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr League:

Included are the results from the testing of material submitted on October 25, 2019 from the SOU_0995-002_20191025, F&BI 910502 project. There are 3 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU1029R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 25, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_ 0995-002_ 20191025, F&BI 910502 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
910502 -01	UST-15-20191024
910502 -02	UST-16-20191024
910502 -03	UST-17-20191024
910502 -04	UST-18-20191024
910502 -05	UST-19-20191024
910502 -06	UST-20-20191024
910502 -07	UST-21-20191024
910502 -08	UST-22-20191024

The samples were sent to Fremont Analytical for flashpoint analysis. The report will be forwarded upon receipt.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/19

Date Received: 10/25/19

Project: SOU_ 0995-002_ 20191025, F&BI 910502

Date Extracted: 10/25/19

Date Analyzed: 10/25/19

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID**

Results Reported on a Dry Weight Basis

Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 56-165)
UST-15-20191024 910502-01 1/1,000	ND	D	ND	143
UST-16-20191024 910502-02 1/1,000	ND	D	ND	163
UST-17-20191024 910502-03 1/1,000	ND	D	ND	150
UST-18-20191024 910502-04 1/1,000	ND	D	ND	137
UST-19-20191024 910502-05 1/1,000	ND	D	ND	143
UST-20-20191024 910502-06 1/1,000	ND	D	ND	68
UST-21-20191024 910502-07 1/1,000	ND	D	ND	143
UST-22-20191024 910502-08 1/1,000	ND	D	ND	155
Method Blank 09-2647 MB	ND	ND	ND	94

ND - Material not detected at or above 20,000 mg/kg gas, 50,000 mg/kg diesel and 250,000 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

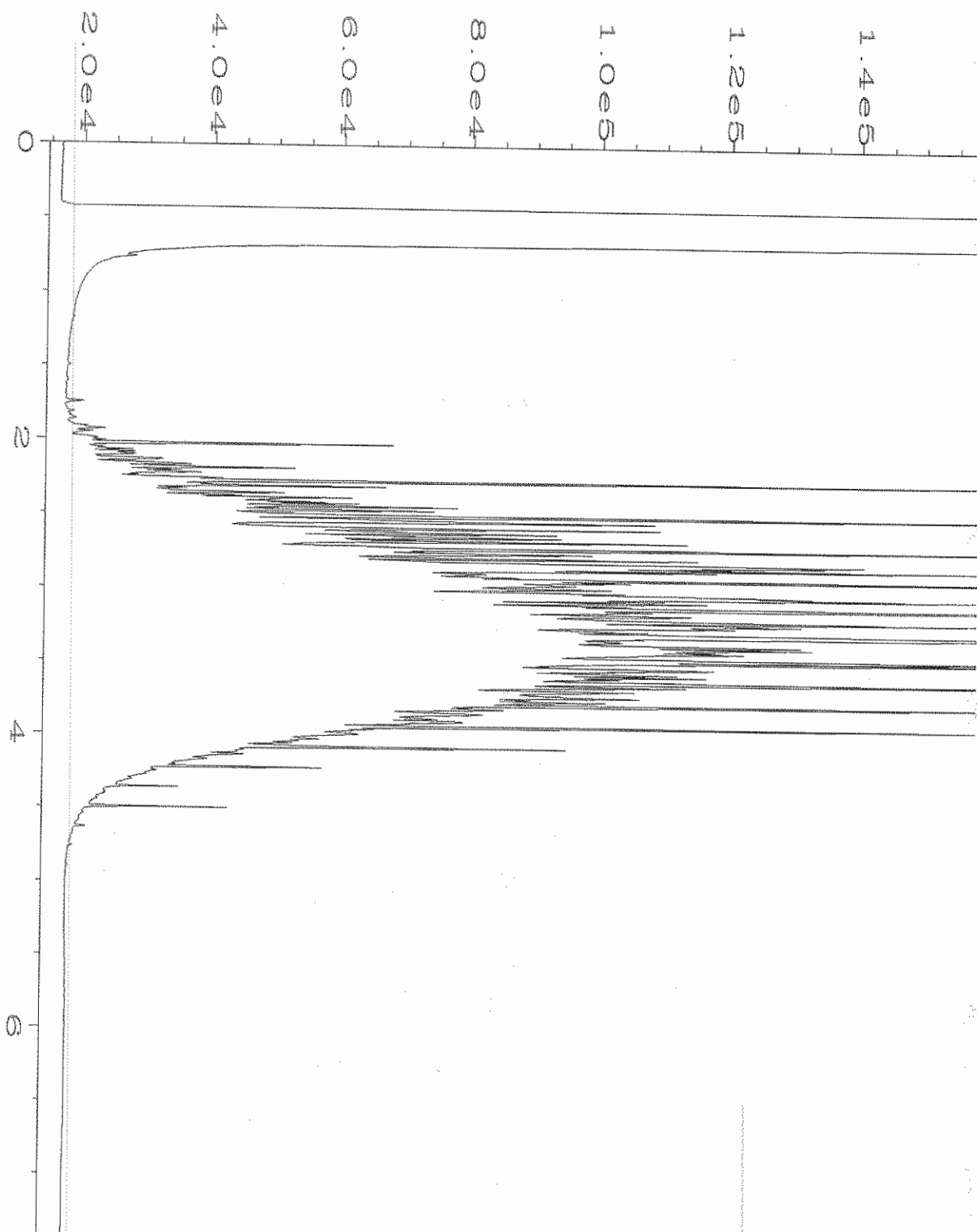
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

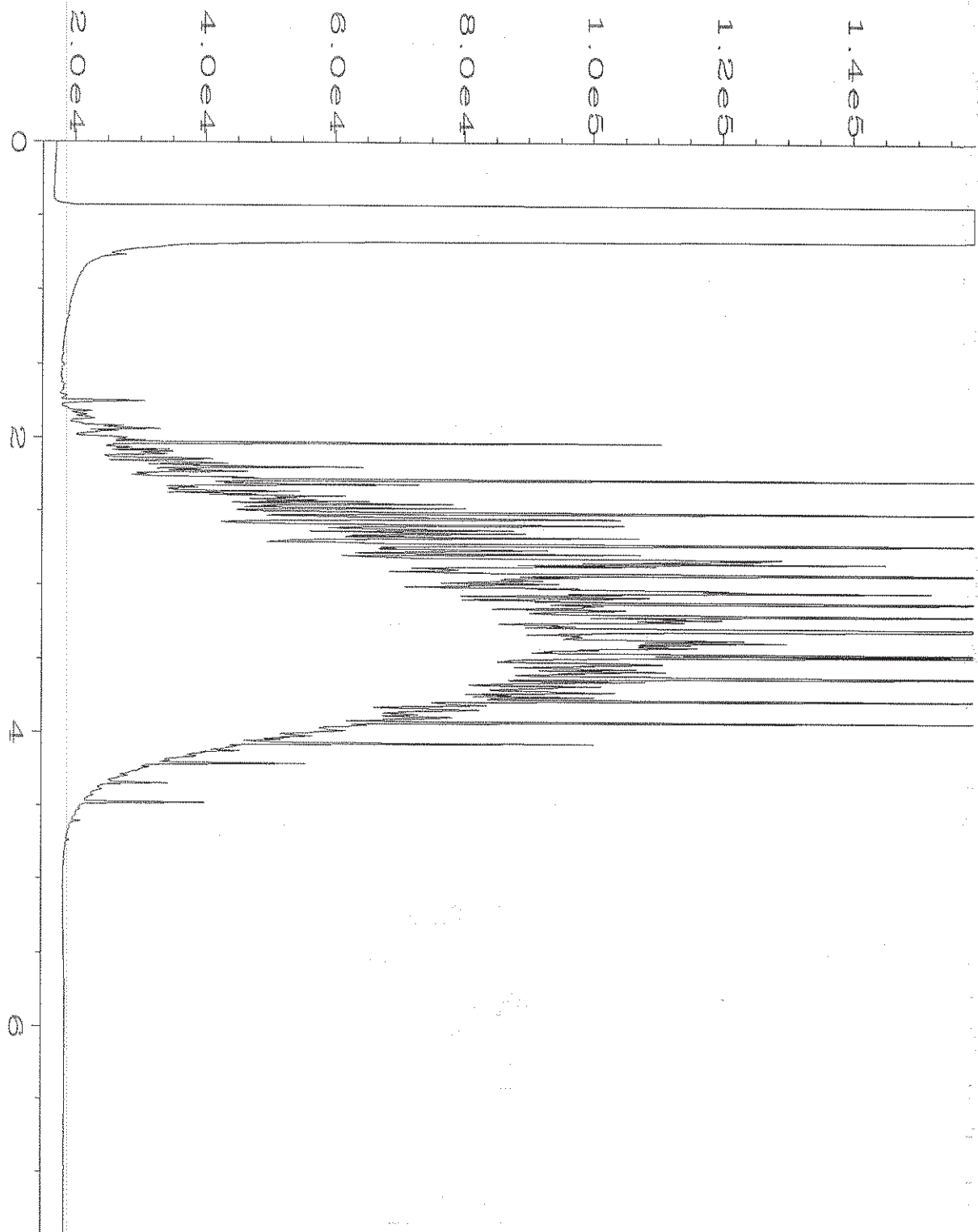
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

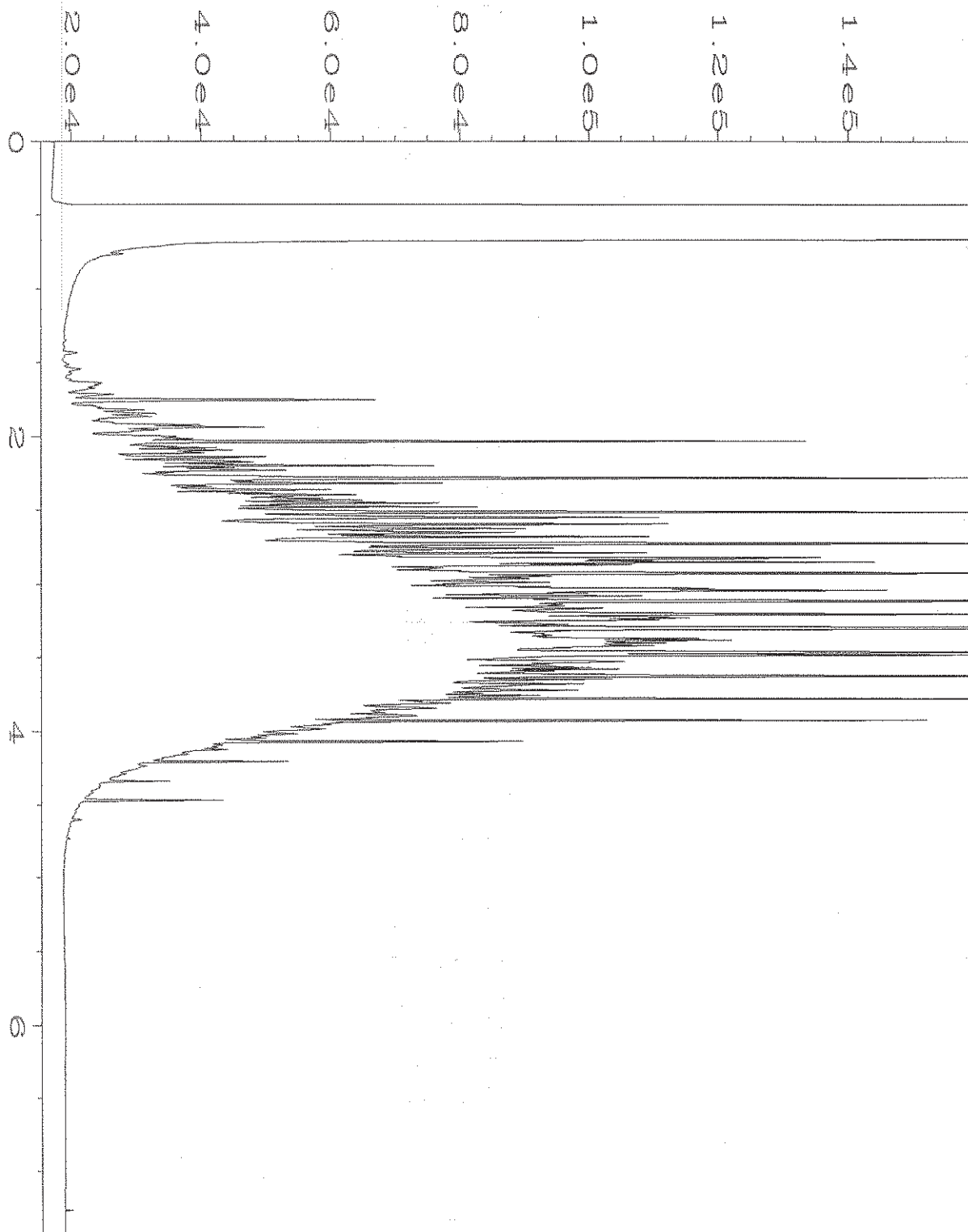
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



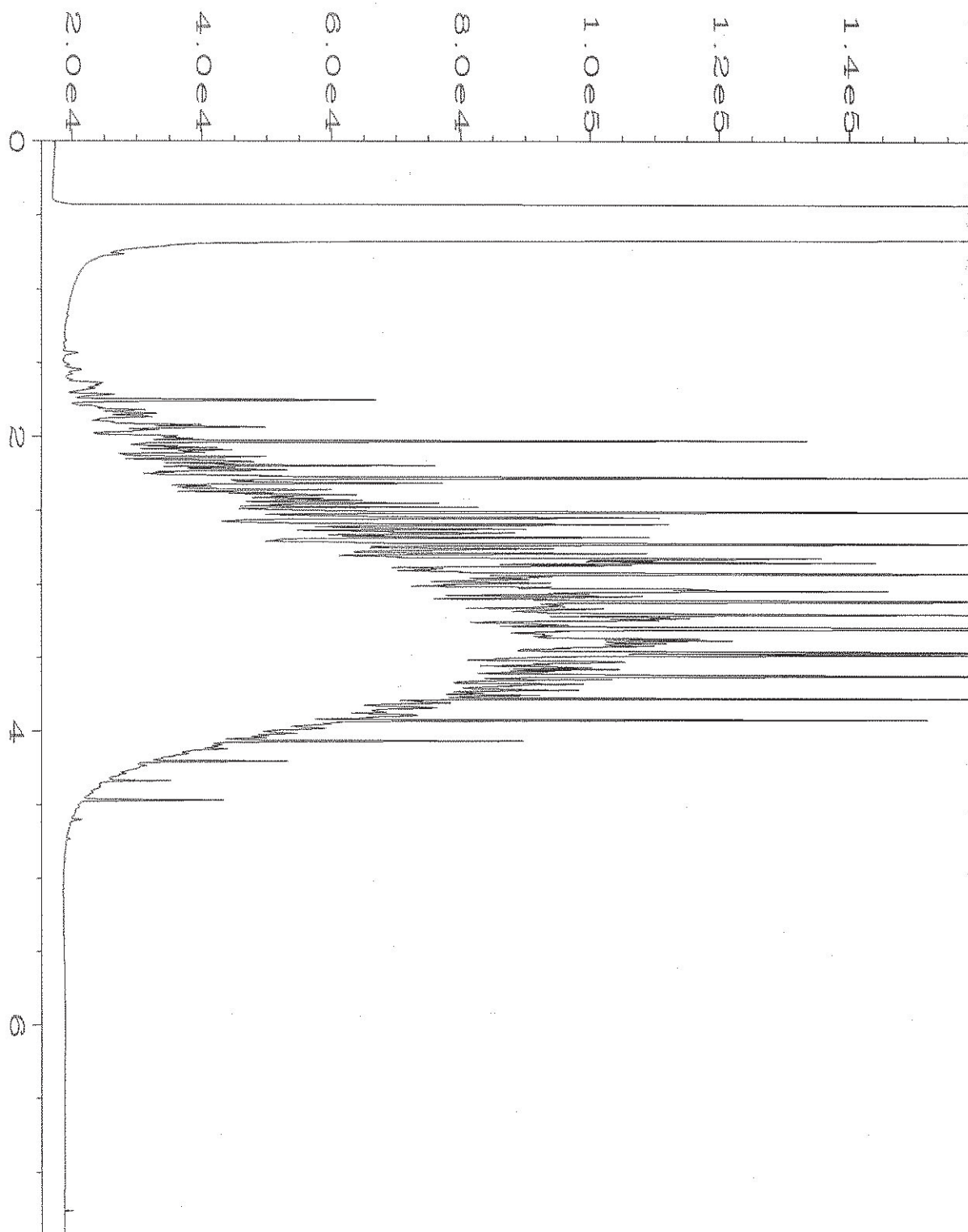
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Operator	: TL	Vial Number	: 34
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-01 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:04 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:24 AM		



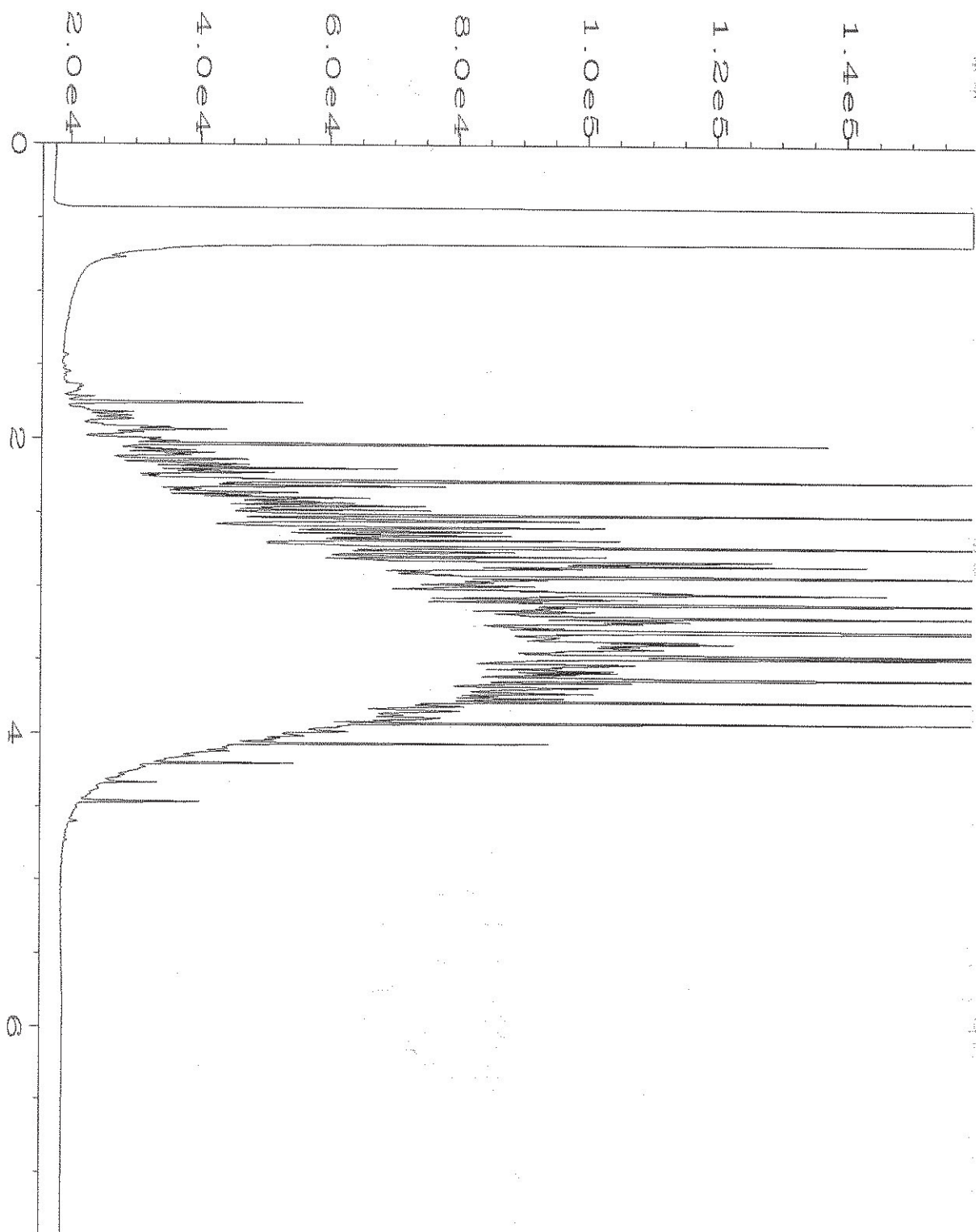
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Operator	: TL	Vial Number	: 35
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-02 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:13 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:24 AM		



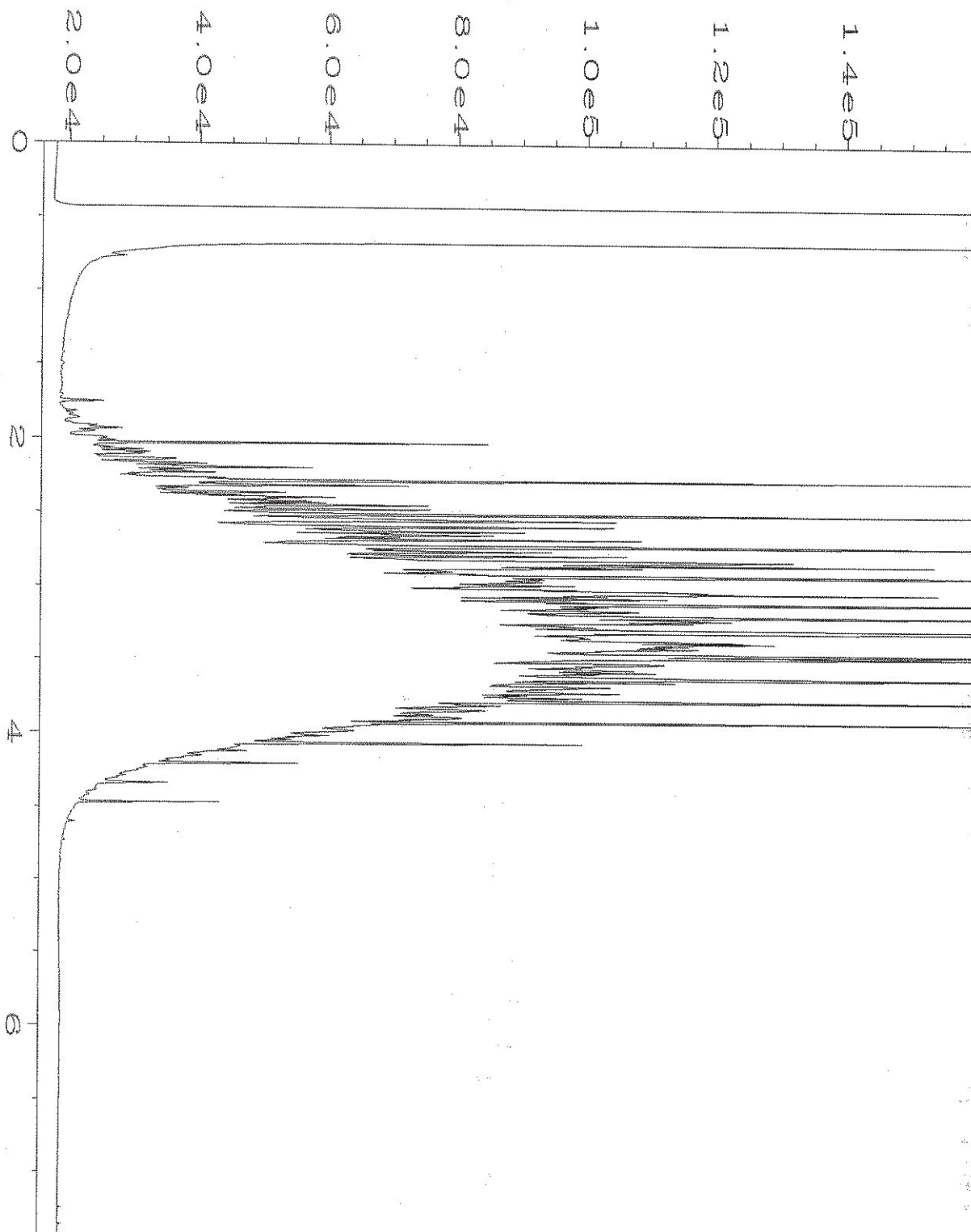
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Operator	: TL	Vial Number	: 36
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-03 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:24 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:25 AM		



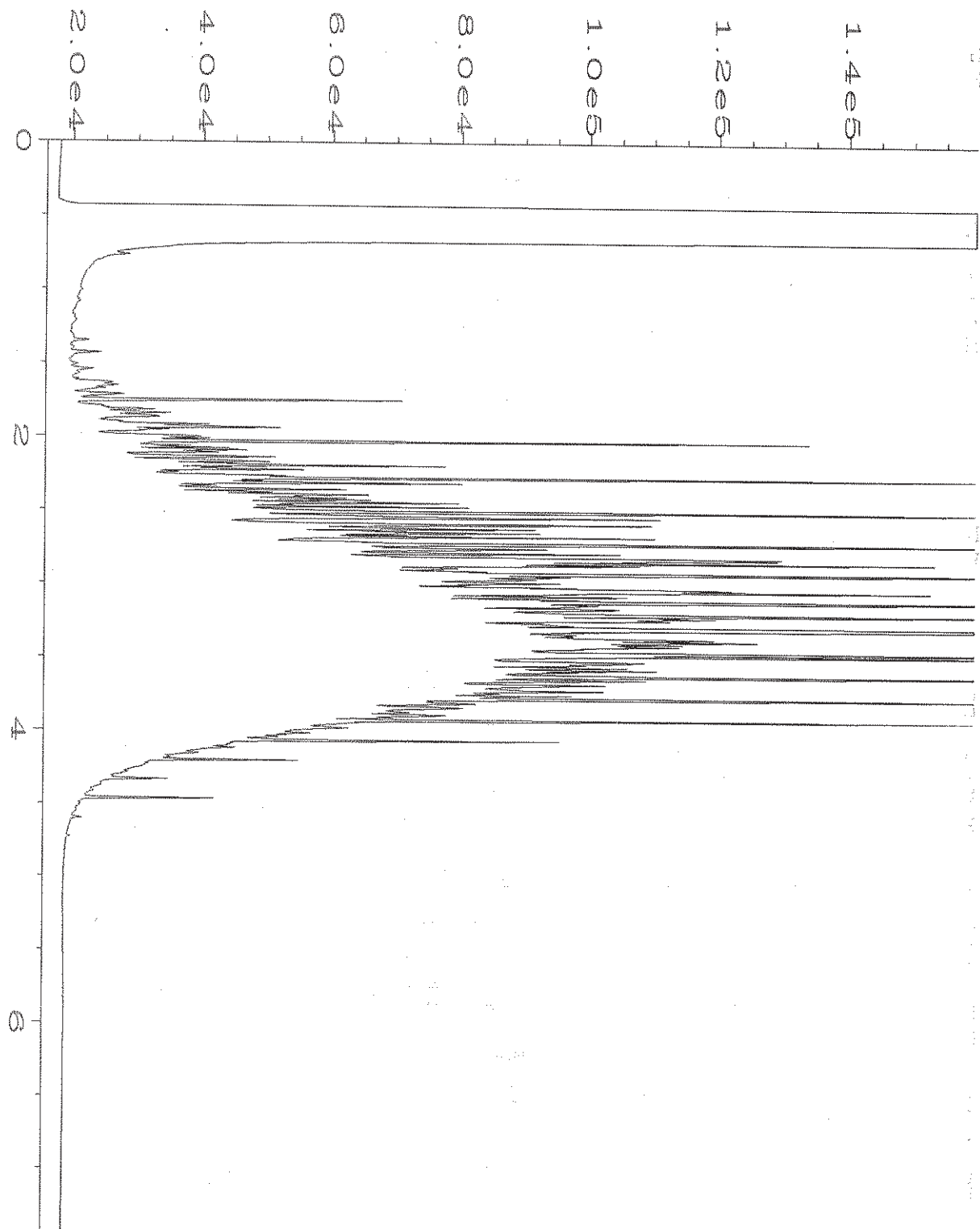
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-03 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:24 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:25 AM		



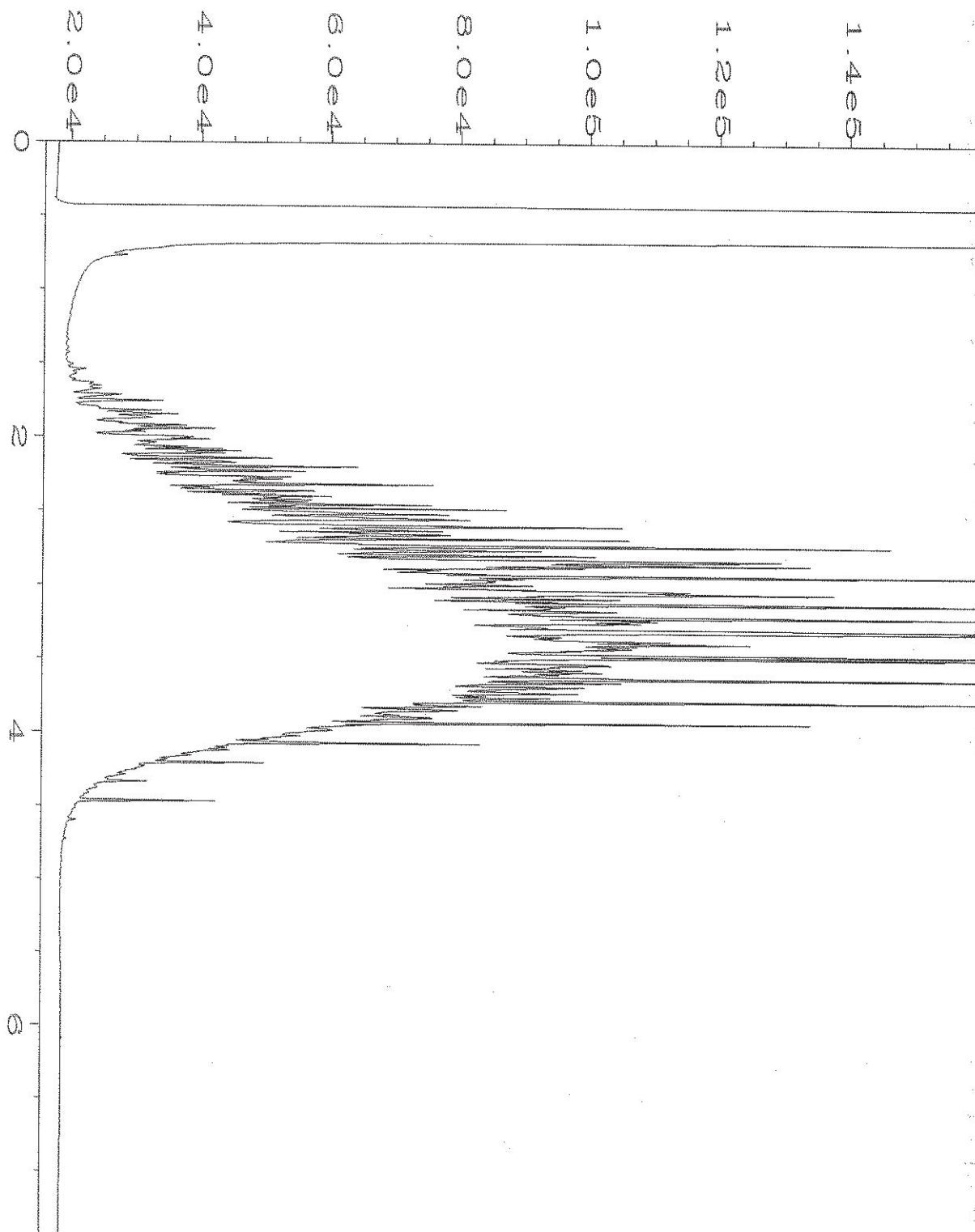
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Operator	: TL	Vial Number	: 37
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-04 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:36 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:25 AM		



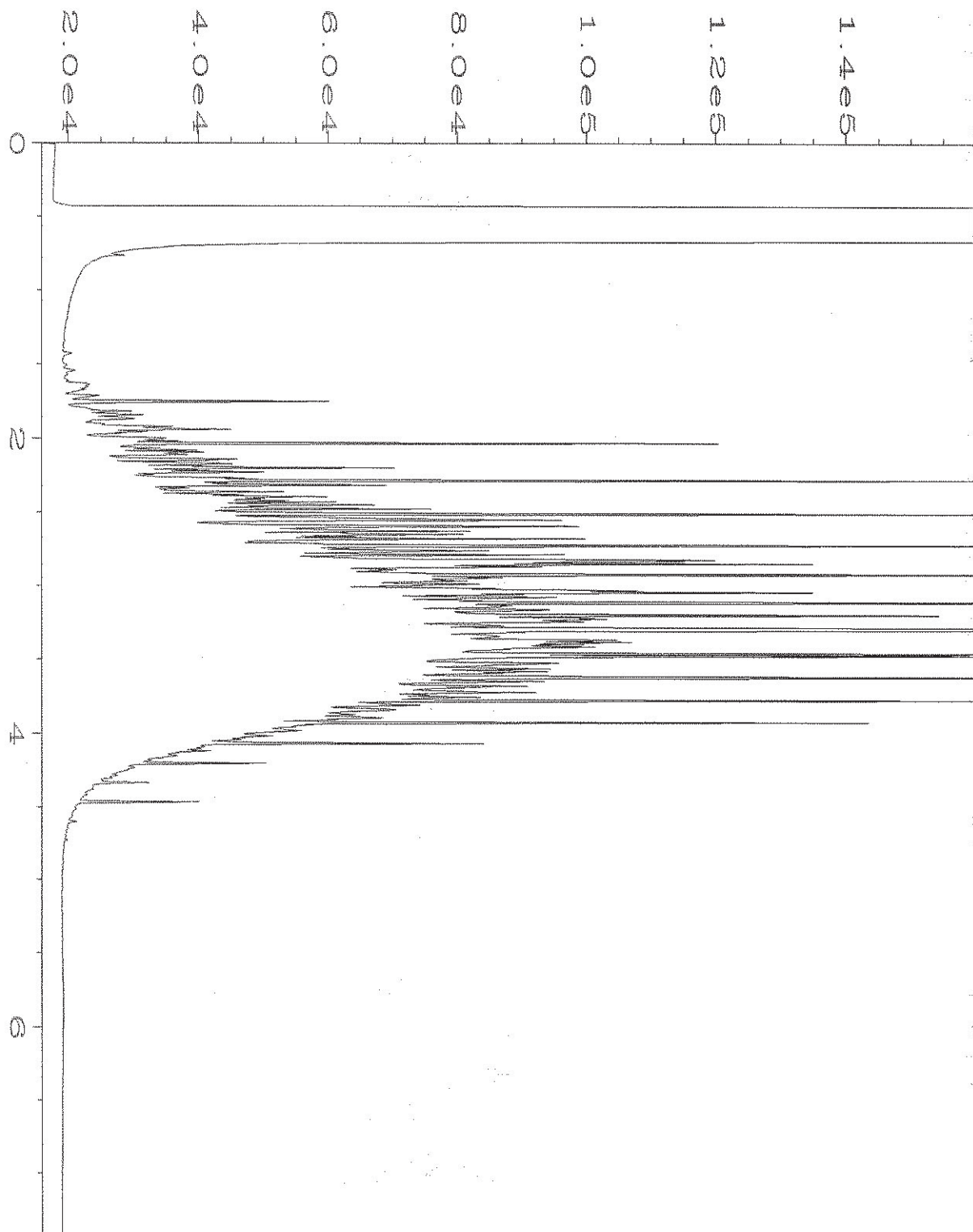
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Operator	: TL	Vial Number	: 38
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-05 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:47 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:25 AM		



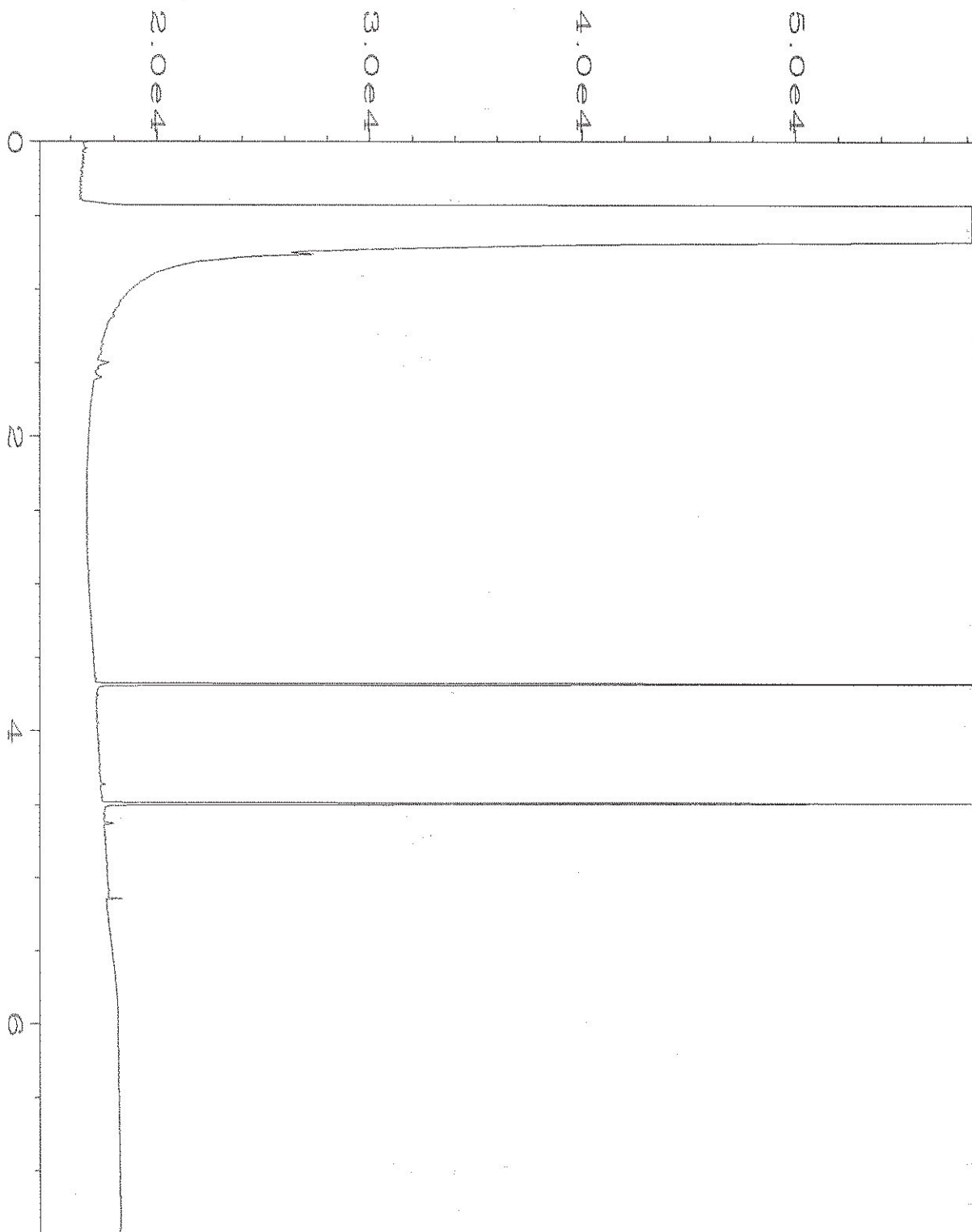
Data File Name	: C:\HPCHEM\1\DATA\10-25-19\039F0601.D	Page Number	: 1
Operator	: TL	Vial Number	: 39
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-06 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:59 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:26 AM		



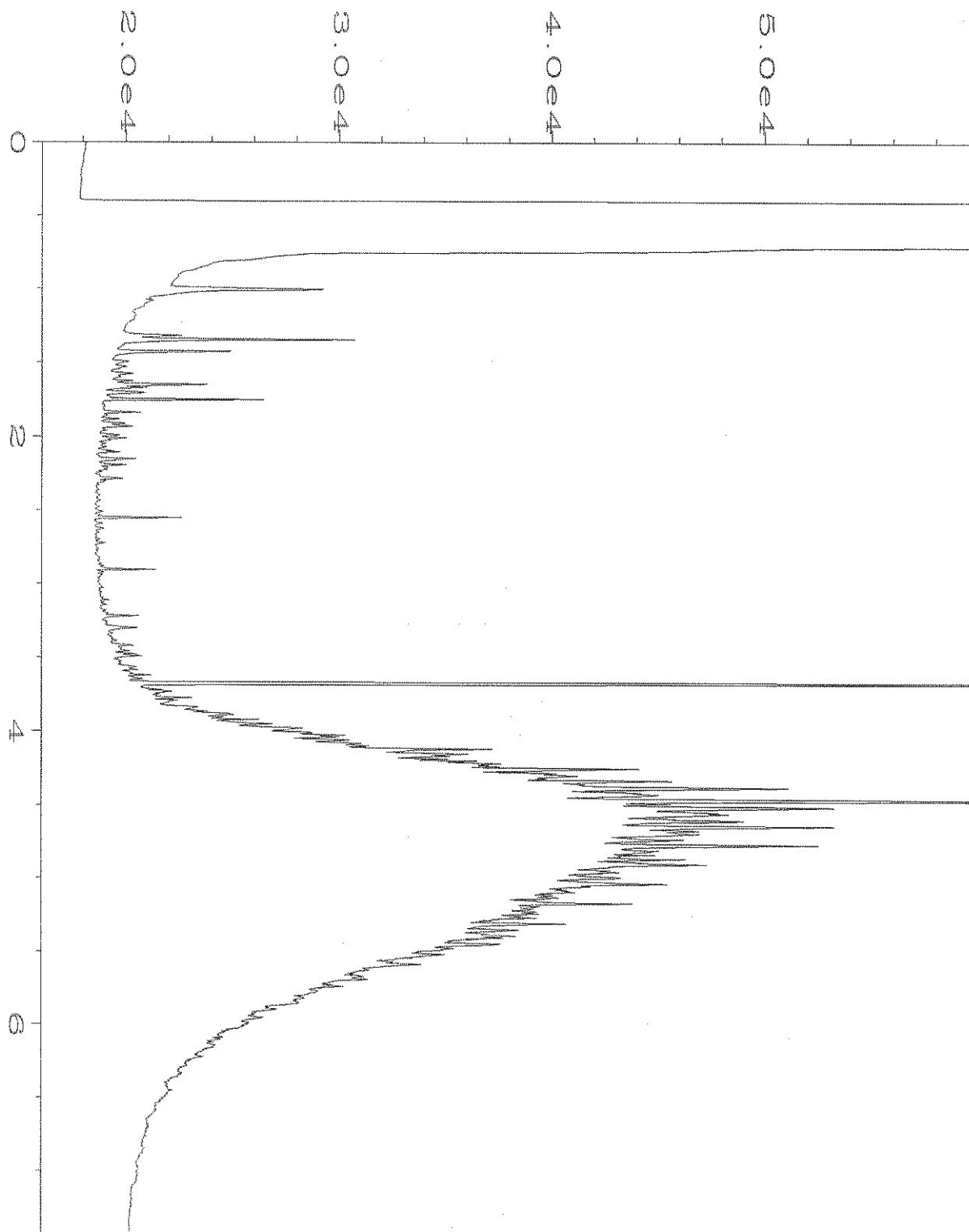
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Operator	: TL	Vial Number	: 40
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-07 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:10 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:26 AM		



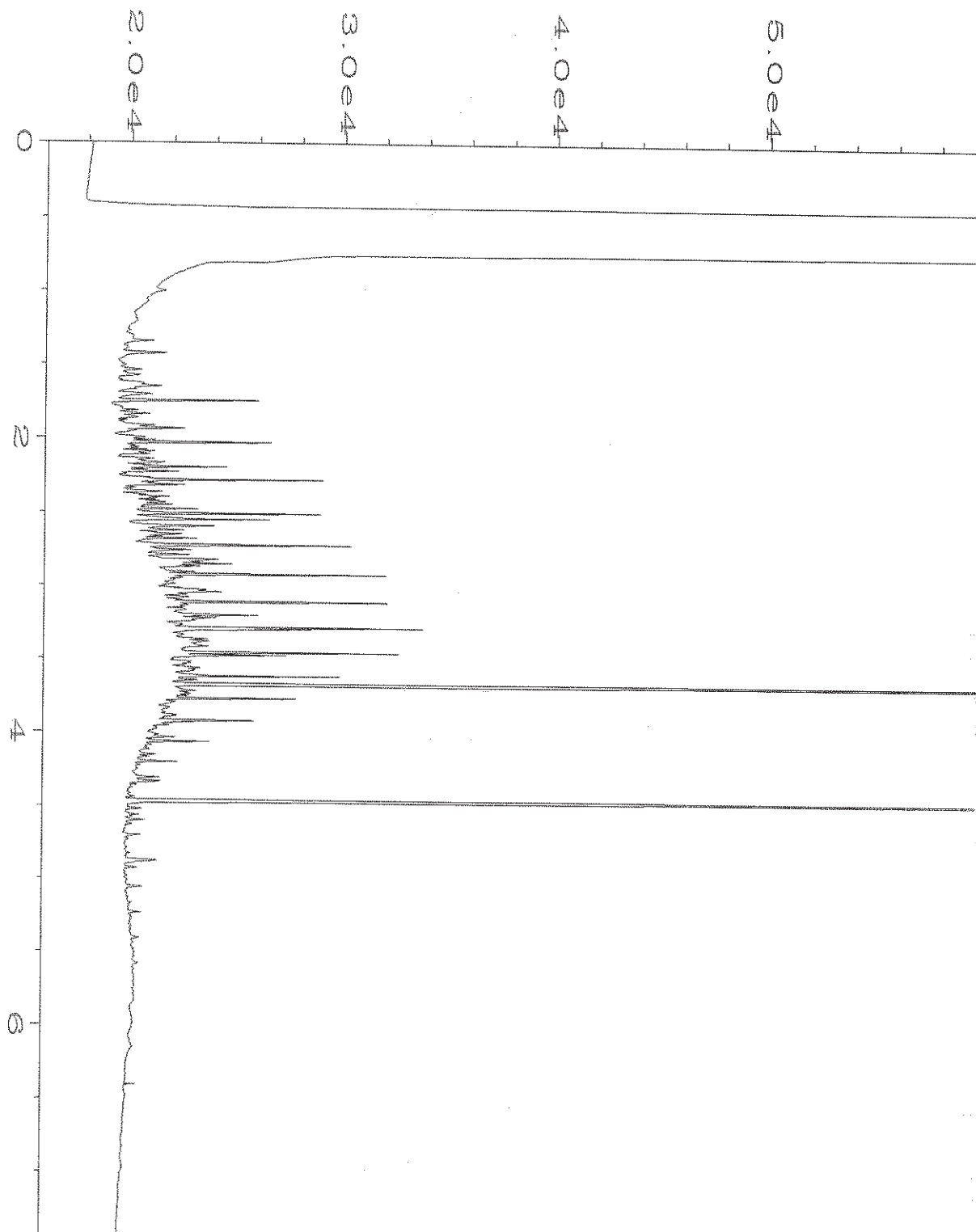
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Operator	: TL	Vial Number	: 41
Instrument	: GC1	Injection Number	: 1
Sample Name	: 910502-08 1/10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:22 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:26 AM		



Data File Name	: C:\HPCHEM\1\DATA\10-25-19\006F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 6
Instrument	: GC1	Injection Number	: 1
Sample Name	: 09-2647 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 09:06 AM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:18 AM		



Data File Name	: C:\HPCHEM\1\DATA\10-25-19\096F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 96
Instrument	: GC1	Injection Number	: 1
Sample Name	: HCIDs G/M 57-167	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 06:40 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:17 AM		



Data File Name	: C:\HPCHEM\1\DATA\10-25-19\097F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 97
Instrument	: GC1	Injection Number	: 1
Sample Name	: HCIDs Dx 57-78D	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 06:51 PM	Analysis Method	: DX.MTH
Report Created on:	28 Oct 19 09:17 AM		

DDZ

Phone # 206-306-1940 Fax #

REMARKS

Page # 1 of 1

TURNAROUND TIME

☐ Standard (2 Weeks)

BRUSH 24 HR

Rush charges authorized by:

C. League

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples

☒ Will call with instructions

FORMS\COC\SESGEMSR1.DOC (Revision 1)



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 910502
Work Order Number: 1910463

October 29, 2019

Attention Michael Erdahl:

Fremont Analytical, Inc. received 8 sample(s) on 10/25/2019 for the analyses presented in the following report.

Flashpoint by EPA 1010/ASTM D93

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Friedman & Bruya
Project: 910502
Work Order: 1910463

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1910463-001	UST-15-20191024	10/24/2019 3:27 PM	10/25/2019 2:38 PM
1910463-002	UST-16-20191024	10/24/2019 3:18 PM	10/25/2019 2:38 PM
1910463-003	UST-17-20191024	10/24/2019 3:02 PM	10/25/2019 2:38 PM
1910463-004	UST-18-20191024	10/24/2019 2:55 PM	10/25/2019 2:38 PM
1910463-005	UST-19-20191024	10/24/2019 2:40 PM	10/25/2019 2:38 PM
1910463-006	UST-20-20191024	10/24/2019 2:25 PM	10/25/2019 2:38 PM
1910463-007	UST-21-20191024	10/24/2019 2:10 PM	10/25/2019 2:38 PM
1910463-008	UST-22-20191024	10/24/2019 1:50 PM	10/25/2019 2:38 PM

CLIENT: Friedman & Bruya**Project:** 910502

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Friedman & Bruya

Collection Date: 10/24/2019 3:27:00 PM

Project: 910502

Lab ID: 1910463-001

Matrix: Product

Client Sample ID: UST-15-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	190			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 3:18:00 PM

Project: 910502

Lab ID: 1910463-002

Matrix: Product

Client Sample ID: UST-16-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	180			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 3:02:00 PM

Project: 910502

Lab ID: 1910463-003

Matrix: Product

Client Sample ID: UST-17-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	165			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 2:55:00 PM

Project: 910502

Lab ID: 1910463-004

Matrix: Product

Client Sample ID: UST-18-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	165			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 2:40:00 PM

Project: 910502

Lab ID: 1910463-005

Matrix: Product

Client Sample ID: UST-19-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	176			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 2:25:00 PM

Project: 910502

Lab ID: 1910463-006

Matrix: Product

Client Sample ID: UST-20-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	158			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 2:10:00 PM

Project: 910502

Lab ID: 1910463-007

Matrix: Product

Client Sample ID: UST-21-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	>200			°F	1	10/28/2019 11:24:51 AM
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Client: Friedman & Bruya

Collection Date: 10/24/2019 1:50:00 PM

Project: 910502

Lab ID: 1910463-008

Matrix: Product

Client Sample ID: UST-22-20191024

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Flashpoint by EPA 1010/ASTM D93

Batch ID: R54883 Analyst: CJ

Flashpoint	183			°F	1	10/28/2019 11:24:51 AM
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Client Name: **FB**
 Logged by: **Clare Griggs**

Work Order Number: **1910463**
 Date Received: **10/25/2019 2:38:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
COoler	4.6
Sample	5.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1910463

Page # 1 of 1

Send Report To Michael ErdahlCompany Friedman and Bruya, Inc.Address 3012 16th Ave WCity, State, ZIP Seattle, WA 98119Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR

Fremont

PROJECT NAME/NO.

910502

PO #

A-438

REMARKS

Please Email Results

TURNAROUND TIME

☐ Standard (2 Weeks)☒ RUSH 24h

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED										Notes
						Dioxins/Furans	EPH	VPH	Flashpoint							
UST-15-20191024		10/24/19	1527	product					x							
UST-16-20191024			1518						x							
UST-17-20191024			1502						x							
UST-18-20191024			1455						x							
UST-19-20191024			1440						x							
UST-20-20191024			1425						x							
UST-21-20191024			1410						x							
UST-22-20191024			1350						x							

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE

Relinquished by: Received by: 

Relinquished by: _____

Received by: _____

PRINT NAME

Michael Erdahl

Carter Johnson

COMPANY

Friedman & Bruya

FAI

DATE

10/25/19

10/25/19

TIME

10:00 AM

1438

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 29, 2019

Corey League, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr League:

Included are the results from the testing of material submitted on October 25, 2019 from the SOU_0995-002_ 20191025, F&BI 910503 project. There are 3 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU1029R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 25, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0995-002_ 20191025, F&BI 910503 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
910503 -01	UST-27-20191024
910503 -02	UST-28-20191024
910503 -03	UST-29-20191024
910503 -04	UST-31-20191024
910503 -05	UST-32-20191024
910503 -06	UST-33-20191024
910503 -07	UST-34-20191024

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/19

Date Received: 10/25/19

Project: SOU_0995-002_ 20191025, F&BI 910503

Date Extracted: 10/25/19

Date Analyzed: 10/25/19

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)**

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

<u>Sample ID</u> Laboratory ID	<u>Corrected ID</u>	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 47-140)
UST-27-20191024 910503-01	UST-34	ND	D	ND	94
UST-28-20191024 910503-02	UST-33	ND	D	ND	ip
UST-29-20191024 910503-03	UST-32	ND	ND	D	95
UST-31-20191024 910503-04	UST-30	ND	D	ND	67
UST-32-20191024 910503-05	UST-29	ND	D	ND	90
UST-33-20191024 910503-06	UST-28	ND	D	ND	81
UST-34-20191024 910503-07	UST-27	ND	D	ND	94
Method Blank 09-2653 MB		ND	ND	ND	96

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

UST-26 through UST-35 were named incorrectly at the time of sampling.
The corrected tank IDs are listed here, based on the letter dated
Mar. 2, 2020 from Mr. Marten (Marten Law) to Mr. Imke (Ecology)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

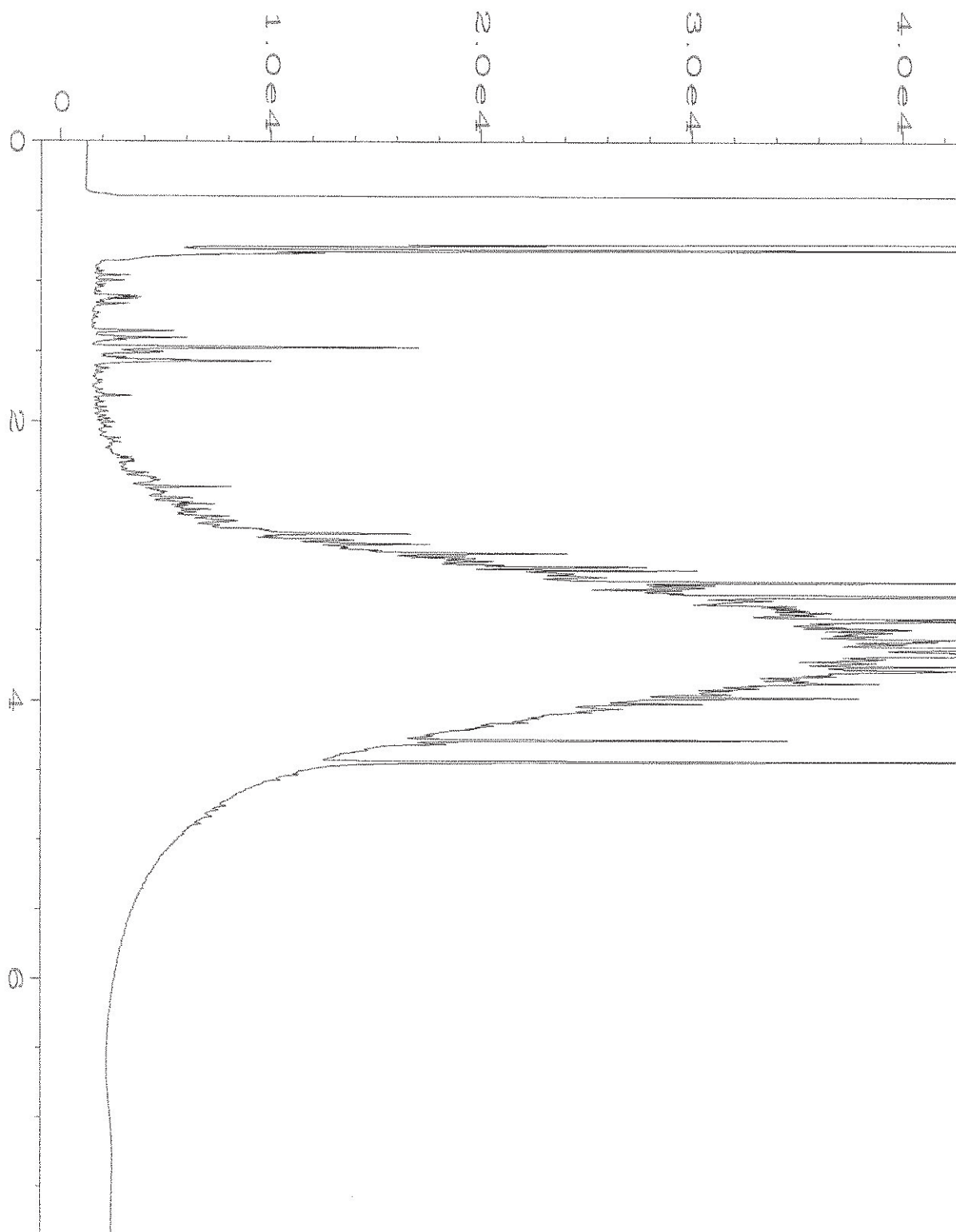
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

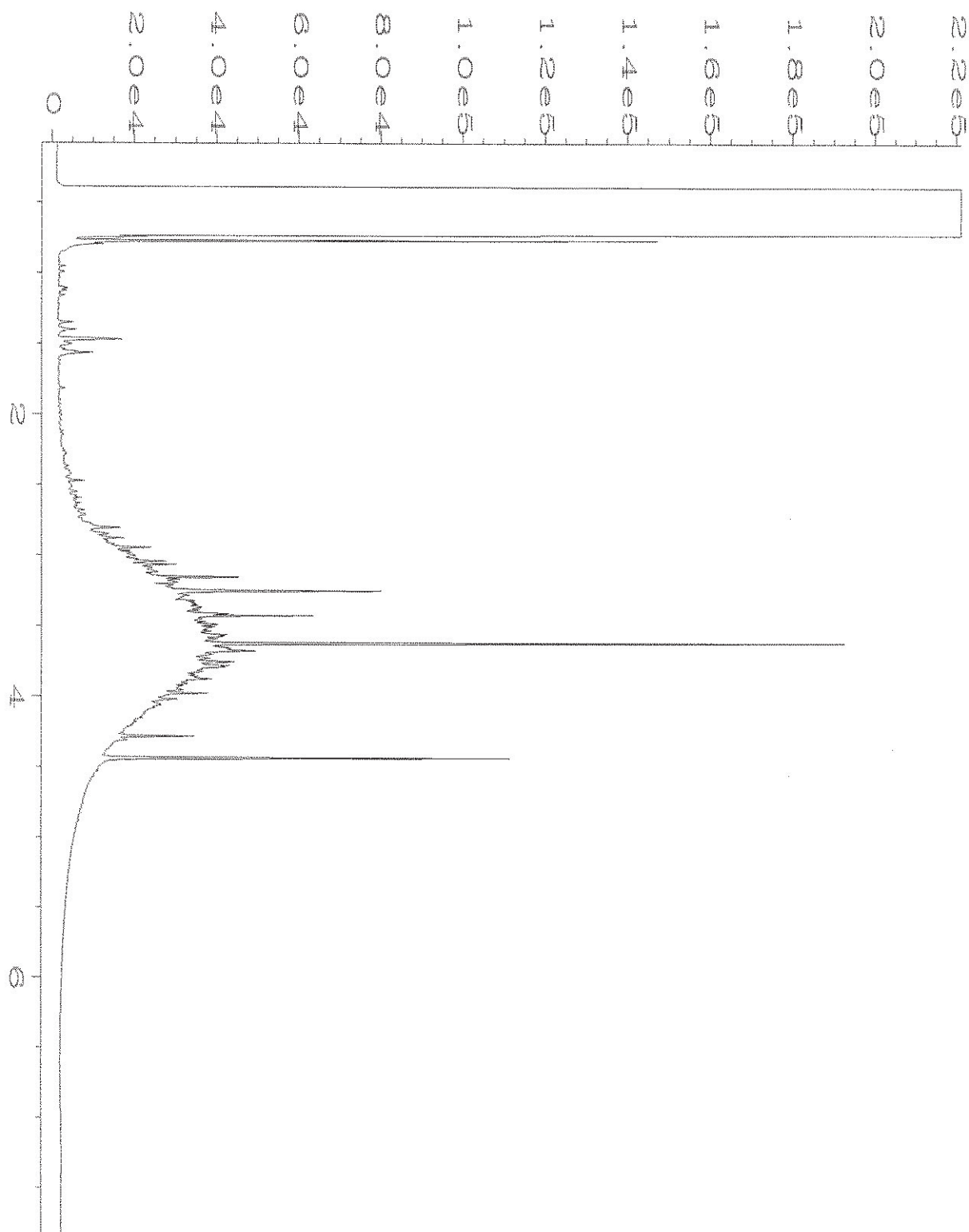
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

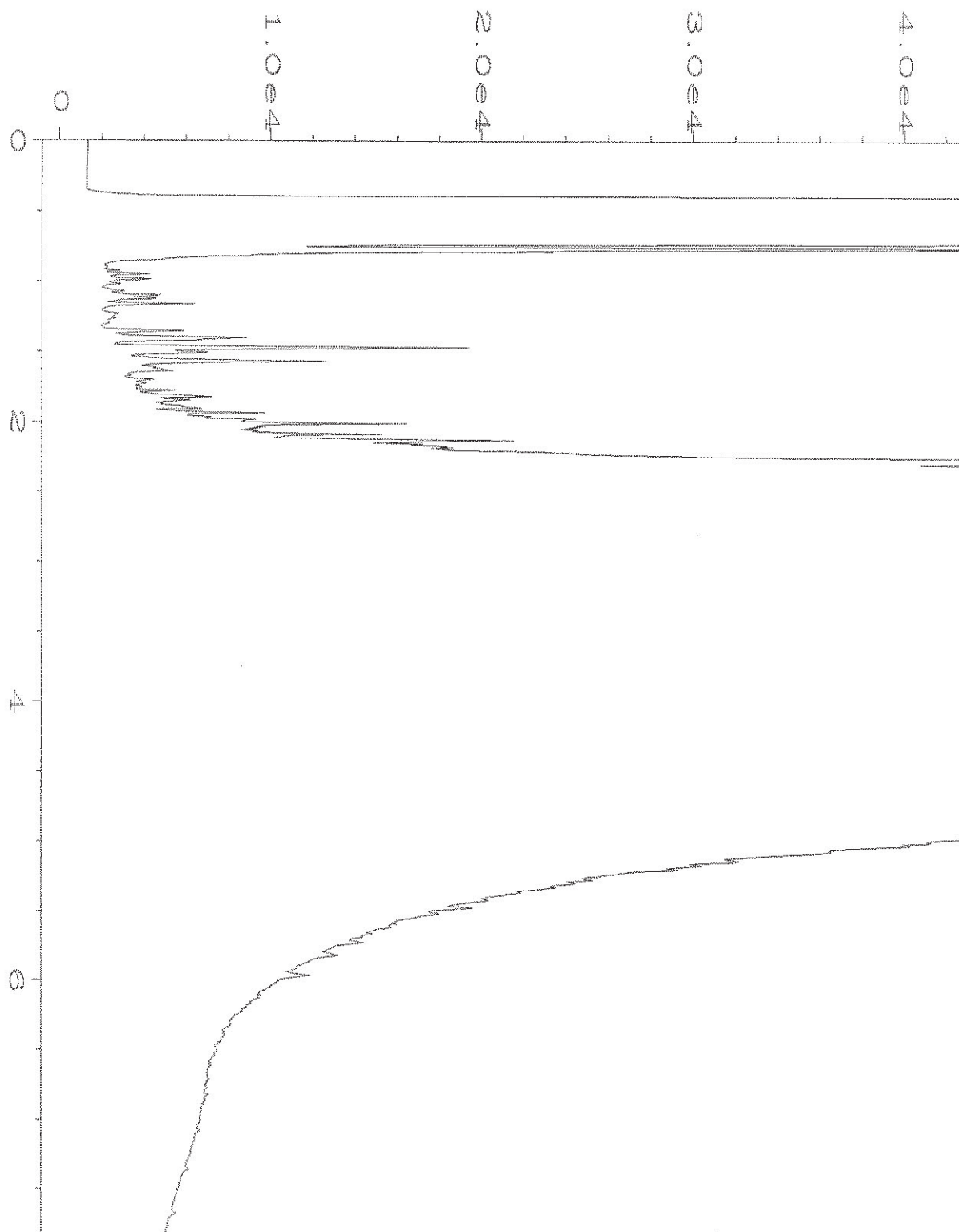
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



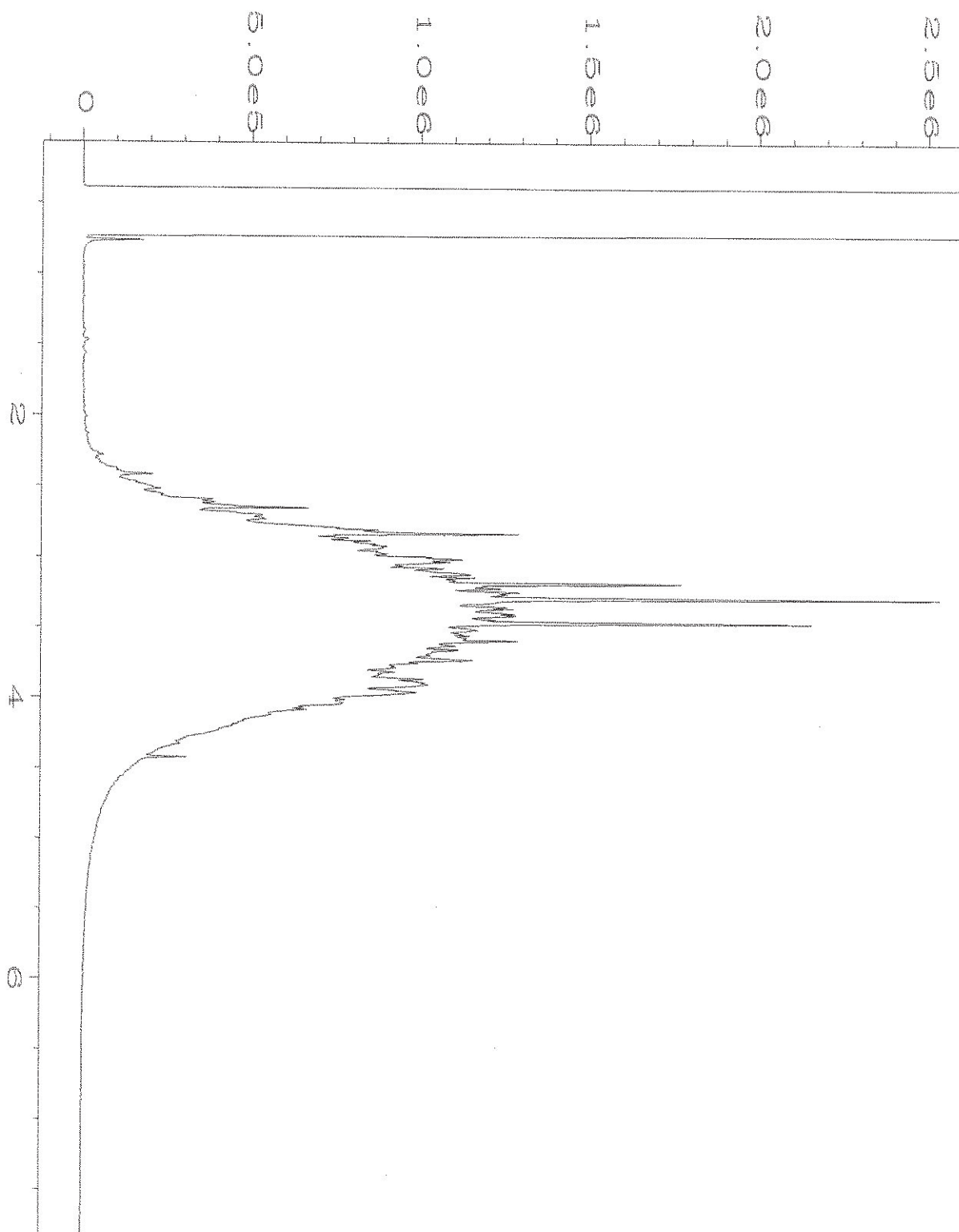
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Operator	: TL	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:36 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:02 AM		



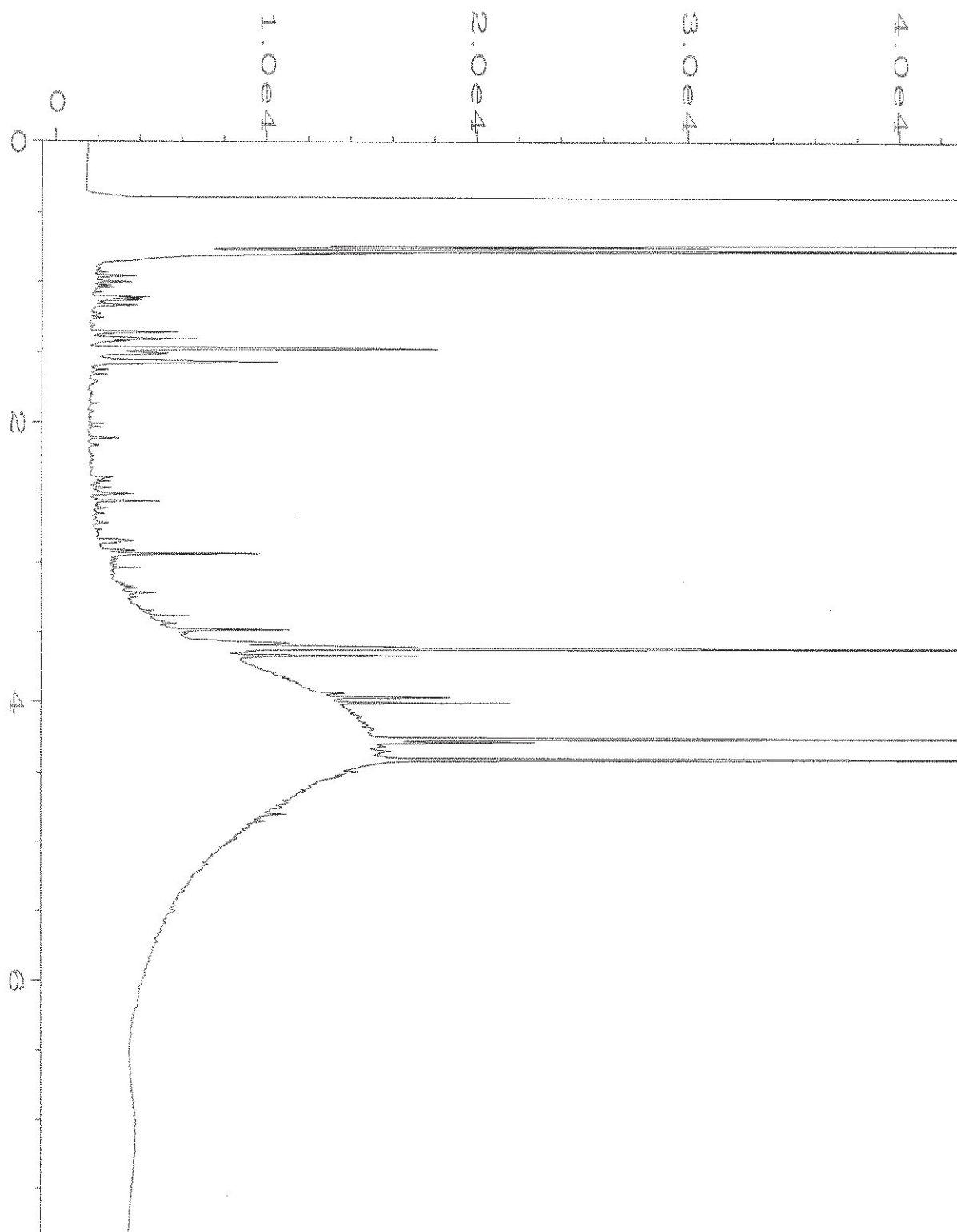
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Operator	: TL	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:36 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:02 AM		



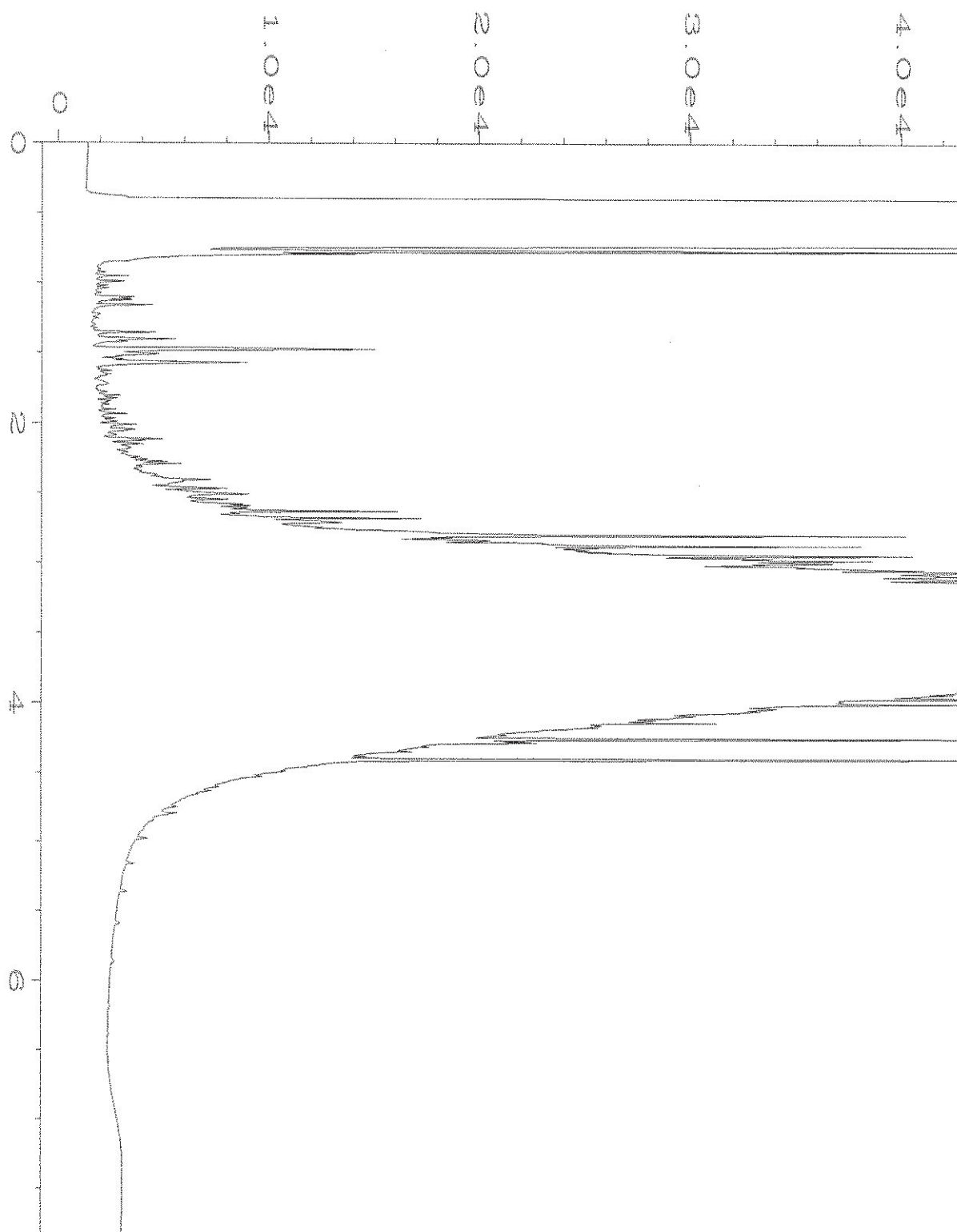
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Operator	: TL	Vial Number	: 31
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:46 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:02 AM		



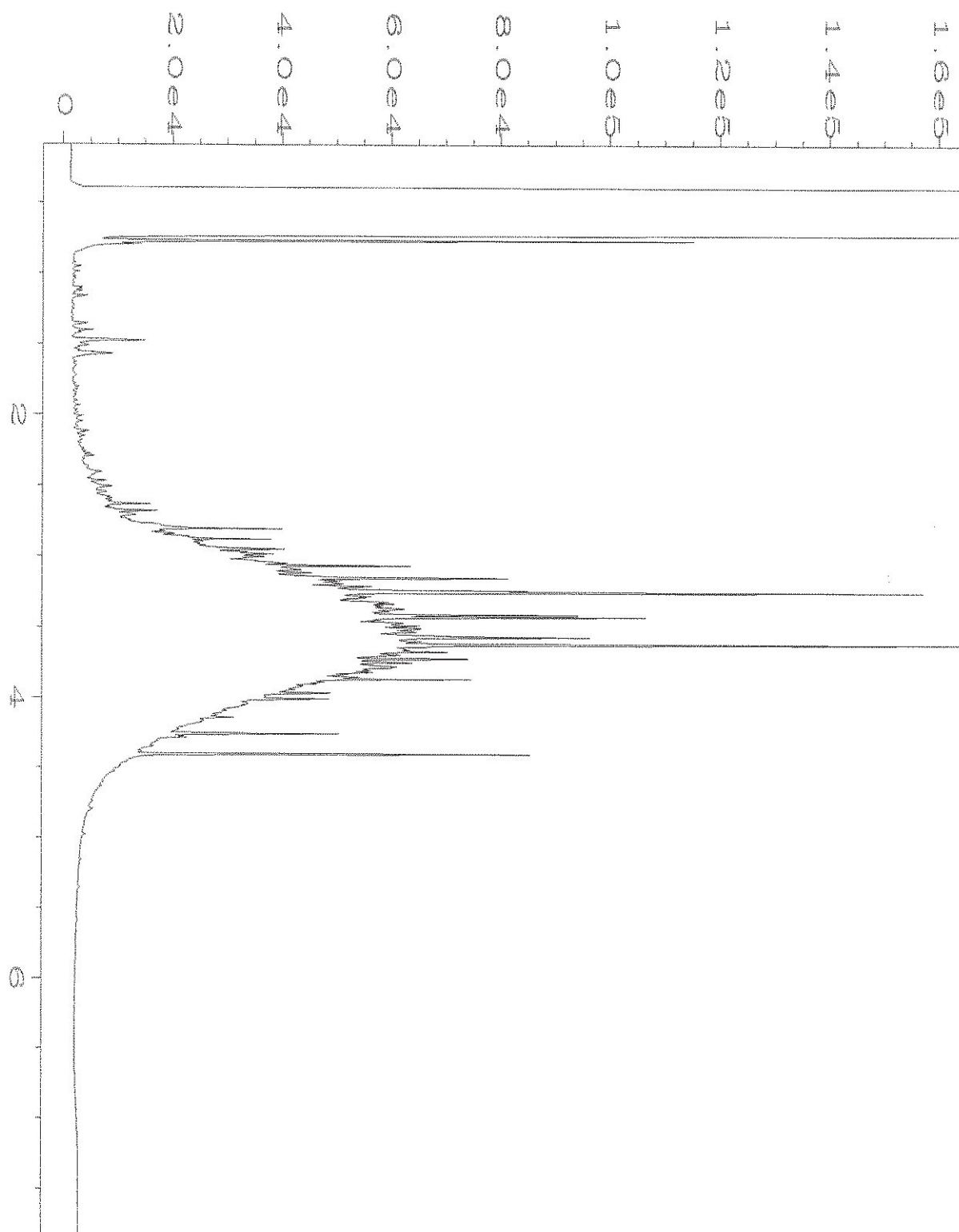
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:46 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 28 Oct 19 10:03 AM		



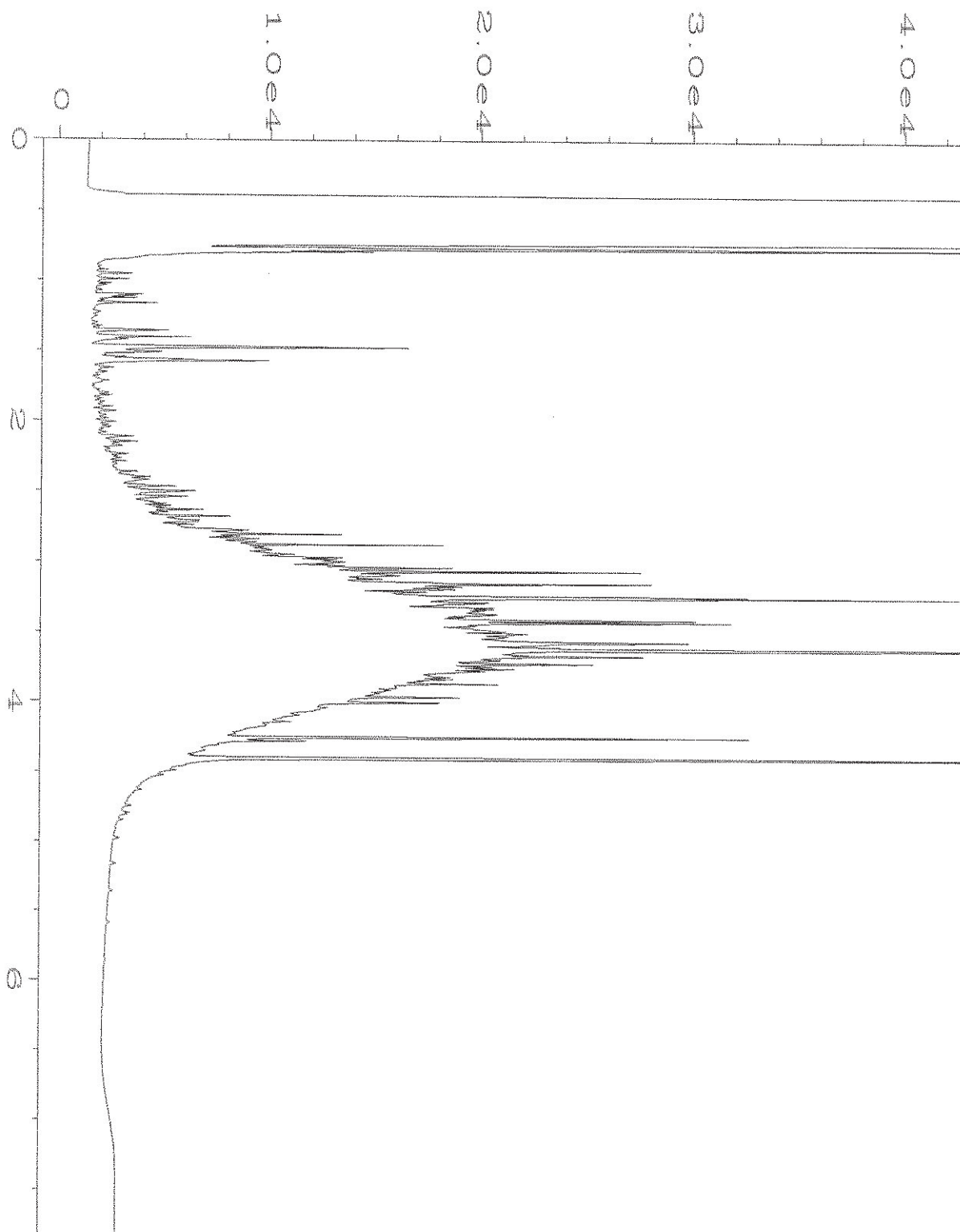
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Operator	: TL	Vial Number	: 32
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-03	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 03:58 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:03 AM		



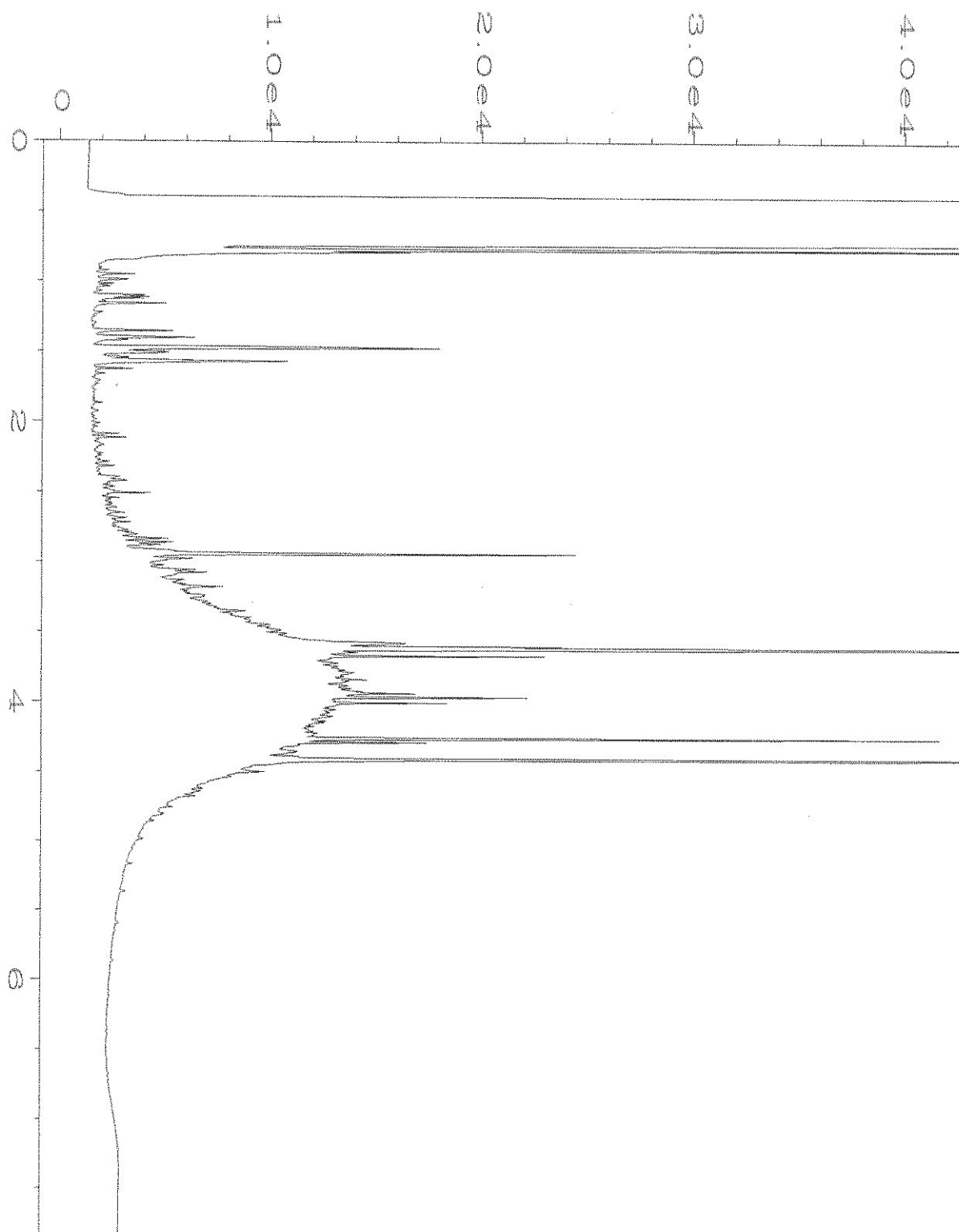
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Operator	: TL	Vial Number	: 33
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-04	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:10 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:03 AM		



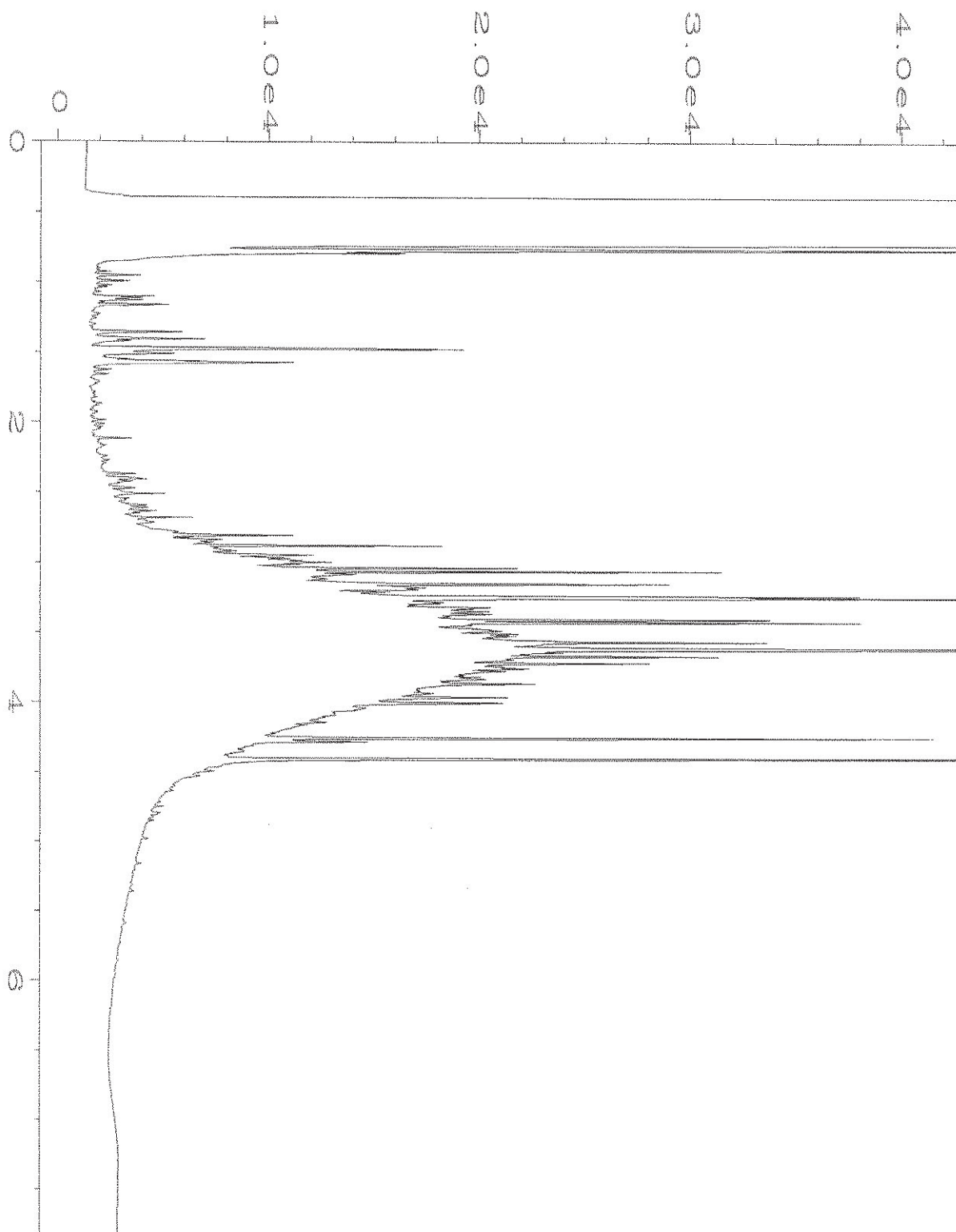
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-04	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:10 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:03 AM		



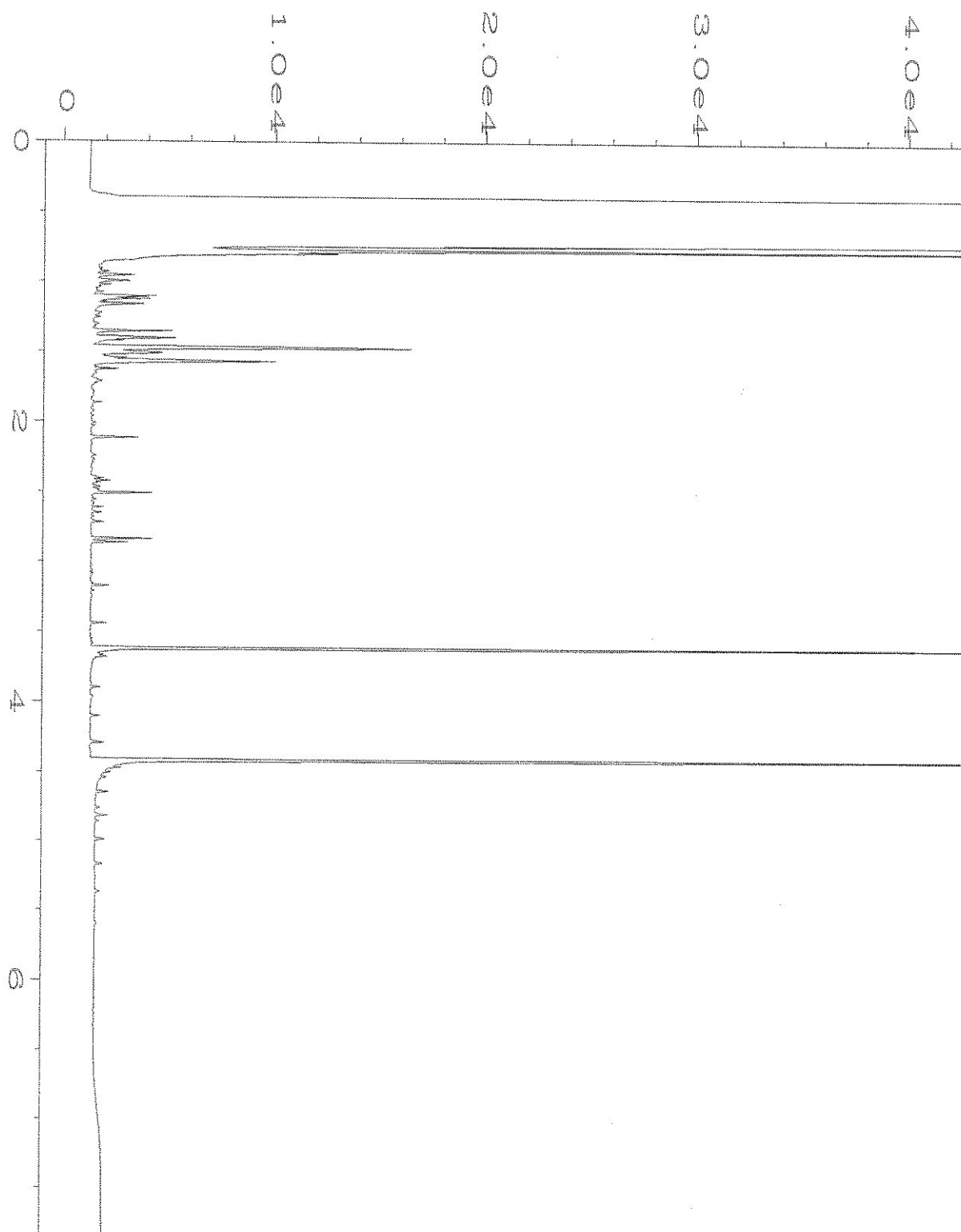
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Operator	: TL	Vial Number	: 34
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-05	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:22 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:25 AM		



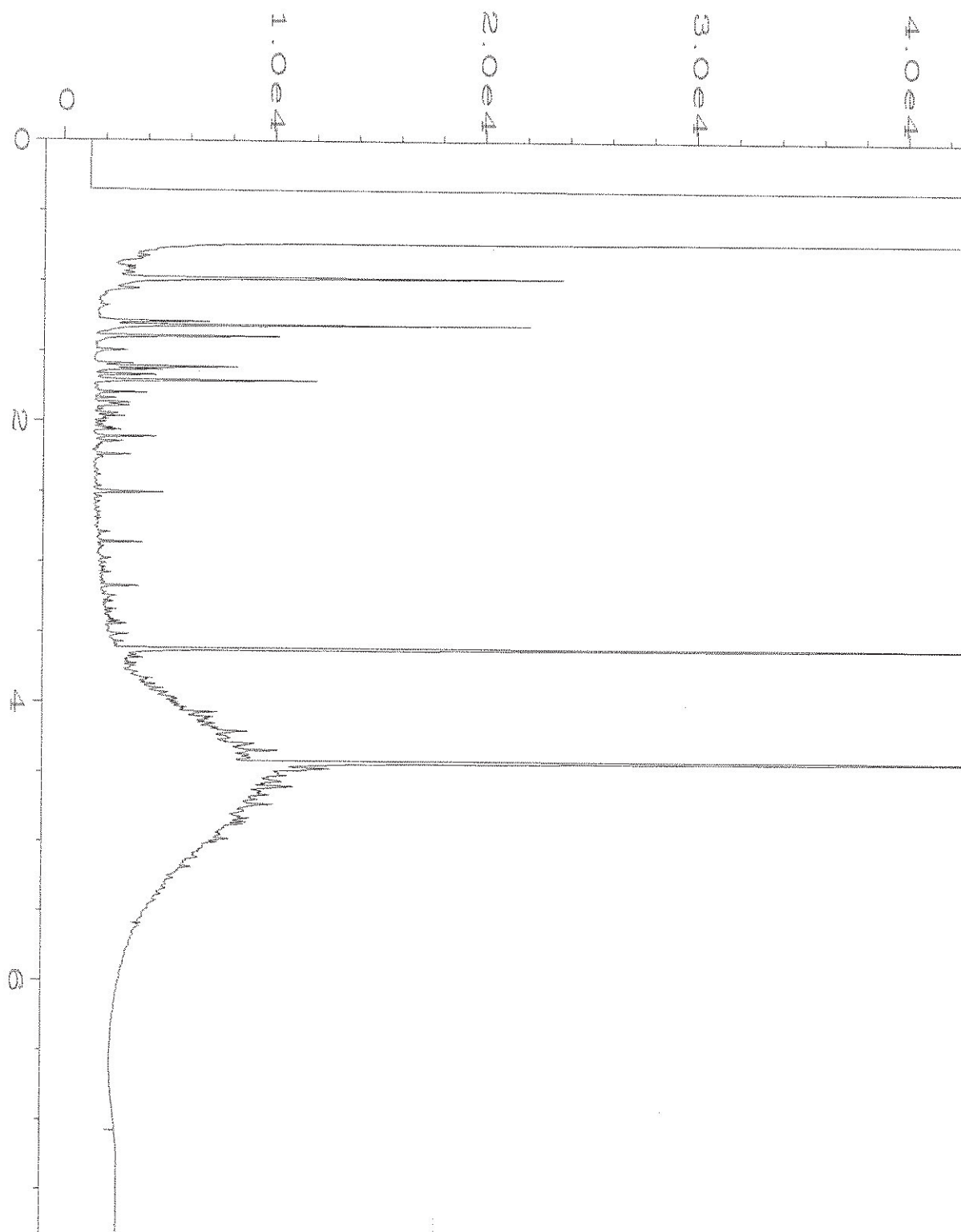
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Operator	: TL	Vial Number	: 35
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-06	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 25 Oct 19 04:34 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:04 AM		



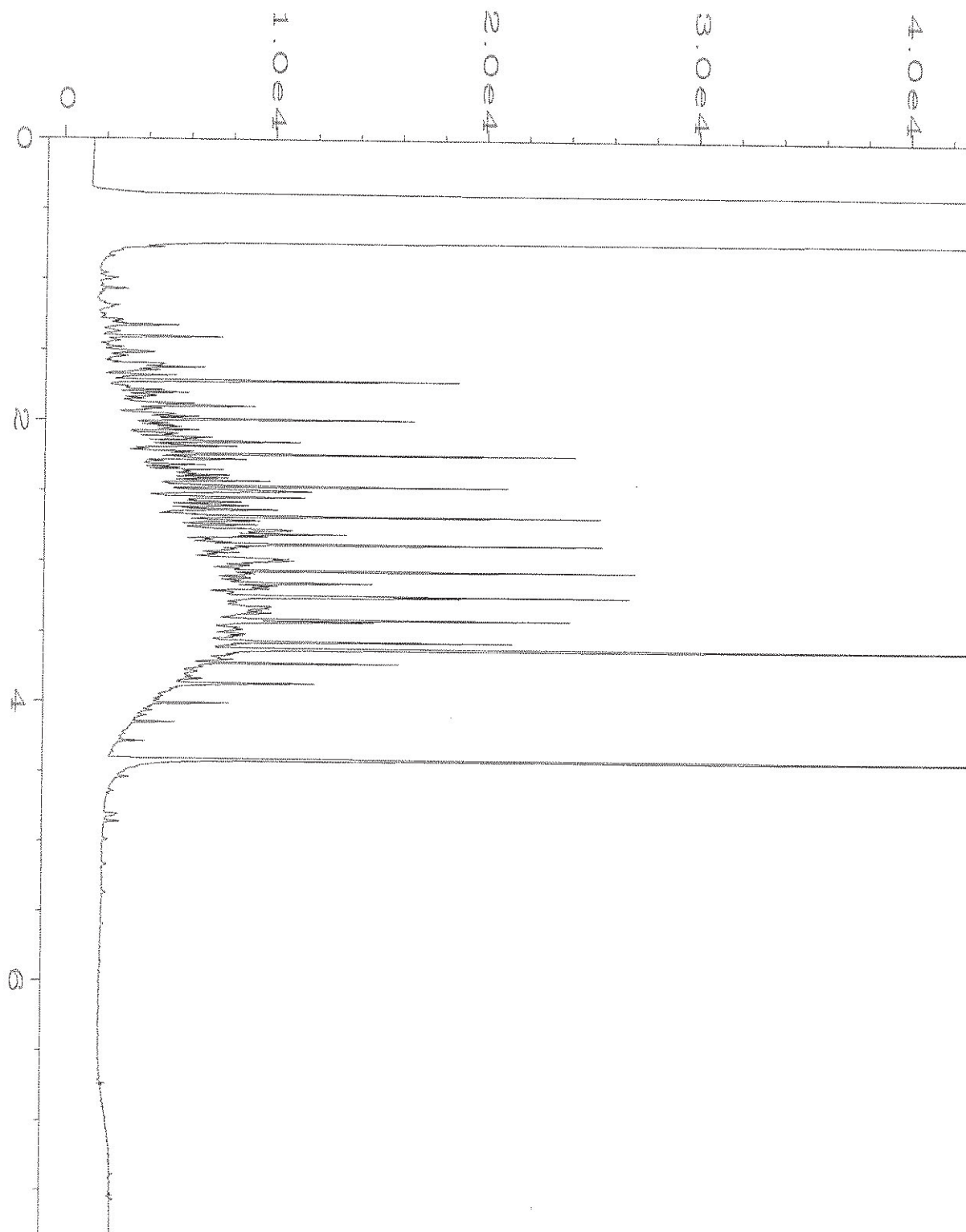
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Operator	: TL	Vial Number	: 36
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 910503-07	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 04:46 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:04 AM		



Data File Name	: C:\HPCHEM\4\DATA\10-25-19\027F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 27
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 09-2653 mb	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 02:13 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:01 AM		



Data File Name	: C:\HPCHEM\4\DATA\10-25-19\098F0901.D	Page Number	: 1
Operator	: TL	Vial Number	: 98
Instrument	: GC#4	Injection Number	: 1
Sample Name	: HCIDw G/M 56-124	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 25 Oct 19 06:06 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:05 AM		



Data File Name	: C:\HPCHEM\4\DATA\10-25-19\099F0901.D	Page Number	: 1
Operator	: TL	Vial Number	: 99
Instrument	: GC#4	Injection Number	: 1
Sample Name	: HCIDw Dx 58-62D	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Oct 19 06:16 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Oct 19 10:05 AM		

ME16125719 1004 / NW3

Send Report To Carey League
Company Sound Earth Strategies, Inc.
Address 2841 Fairview Ave East, Suite 2000
City, State, ZIP Seattle, WA 98102
Phone # 206-4436-5919 Fax # -

SAMPLERS (signature)

PROJECT NAME/NO.

0995-002

REMARKS

PO #

TURNAROUND TIME

☐ Standard (2 Weeks)

☒ RUSH 24 HR

Rush charges authorized by:

C. League

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples

☒ Will call with instructions

								ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	HClD	Notes	
UST-27- 20191024	UST-27	-	DIA-E	10/24/19	1315	Water	5							X		
UST-28- 20191024	UST-28	-	02	10/24/19	1255	Water	5							X		
UST-29- 20191024	UST-29	-	03	10/24/19	1235	Water	5							X		
UST-31- 20191024	UST-31	-	04	10/24/19	1215	Water	5							X		
UST-32- 20191024	UST-32	-	05	10/24/19	1148	Water	5							X		
UST-33- 20191024	UST-33	-	06	10/24/19	1120	Water	5							X		
UST-34- 20191024	UST-34	-	07	10/24/19	1050	Water	5							X		
													</			

Samples received at °C

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Camy Leaguie	Sundearth	10/24/14	1745
Received by: 	Nhan Phan	FCBT	10/25/14	1020
Relinquished by:				
Received by:				



DANGEROUS WASTE DESIGNATION FORM

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: **Area-Wide Dust**

Generation Process: This material is a mixture of dust, fine particulates, soil "track-in" and exposed soil that accumulated throughout the facility over many years of operation. The material is not a waste stream that was generated from any one process or unit operation.

RCRA ID Number that waste will be managed under:

Star Forge LLC, DBA Jorgenson Forge:
WAD000602813

Other Descriptions (i.e. Shop, Project, Etc.):

Total Quantity and/or Estimated Generation rate:

Estimated 1-2 tons remaining on-site primarily on the floor of the main structure.

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State:

- ☒ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☐ Liquid (If liquid, indicate if the liquid is:
☐ Single Layer
☐ Multi-layer

pH:

- ☐ < 2 [D002]
☐ > 2 but < 12.5
☒ N/A ☐ > 12.5 [D002]

Flashpoint:

- ☒ N/A ☐ < 140 °F [D001]
☐ > 140 °F but < 200 °F
☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals
			☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L
☐ Ignitable [D001]	☐ Not Detected	☐ Arsenic ≥ 5.0 mg/L [D004]	Arsenic: 110 ☐ ND
☐ Corrosive [D002]	[non TSCA or State Regulated]	☐ Barium ≥ 100.0 mg/L [D005]	Barium: 1900 ☐ ND
☐ Reactive [D003]	☐ Not Sampled	☐ Cadmium ≥ 1.0 mg/L [D006]	Cadmium: 46 ☐ ND
☐ Toxic [D004 – D043]	≥ 2 ppm and < 50 ppm	☐ Chromium ≥ 5.0 mg/L [D007]	Chromium: 70000 ☐ ND
List Here: None	[Potentially TSCA Regulated or State Regulated PCB Waste-WPCB]	☐ Lead ≥ 5.0 mg/L [D008]	Lead: 4200 ☐ ND
	≥ 50 ppm [TSCA Regulated]	☐ Mercury ≥ 0.2 mg/L [D009]	Mercury: 0.58 ☐ ND
	☒ < 1 ppm	☐ Selenium ≥ 1.0 mg/L [D010]	Selenium: 27 ☐ ND
	Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Silver ≥ 5.0 mg/L [D011]	Silver: ND ☐ ND
		Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted	Copper: 3200 ☐ ND
		Comments: TCLP conducted on all RCRA Metals. All samples passed TCLP.	Nickel: 13000 ☐ ND
			Zinc: 8500 ☐ ND
			Comments: Total metals data represents the highest metals concentration across all 22 samples.

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
Dust	80-98
Soil	1-10
Fine Particles (metal, concrete, wood, plastic, etc.)	1-10



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☐ < 0.001 % [not a Toxic Criteria DW] ☒ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

The interior of the main structure comprises the former melt shop, forge shop, and the heat treat area. Star Forge conducted extensive removal of dust, fine particles, and exposed soil (henceforth “area wide dust”) from the floor, trusses, and other structural surfaces during 2019 to early 2020. The area wide dust has been referred to as process waste in previous documents and correspondence. This material is a mixture of dust, fine particulates, soil “track-in” and exposed soil that accumulated throughout the facility over many years of operation. The material is not a waste stream that was generated from any one process or unit operation.

Previous designation of this material is based on total metals, TCLP metals and total PCBs. This waste stream previously “passed” TCLP for RCRA 8 metals. However, the total metals content caused the area-wide dust to “book designate” as a Toxic Criteria Dangerous Waste and was assigned WA State Dangerous Waste number WT02. A fish bioassay was not conducted to refute the book designation; therefore, the WT02 designation was assumed and approximately 2,500,000 lbs of the area wide dust was removed and disposed of as WA State Toxic Criteria waste during 2019 and early 2020.

Although most of the area wide dust has been removed from the facility interior, some of this material remains on the floor of the facility and has possibly comingled with areas of exposed soil. Therefore, an area wide statistical analysis of the dust, fine particles, and exposed soil was conducted to designate the remaining material so that it can be properly managed during the forthcoming demolition of the structures.

The statistical evaluation of the area wide dust was conducted using Visual Sample Plan (VSP); a statistical software package developed by the Pacific Northwest National Laboratory. VSP integrates data quality objectives into a defensible sampling design and conducts the required calculations for sample size and sample location. The required sample size estimated by VSP is based on several variables including the constituent estimated concentration standard deviation, regulatory threshold, and desired confidence level.

The sample design for the area wide sampling incorporated 22 sample locations chosen randomly on a grid generated by VSP. All samples were analyzed for volatiles by EPA Method 8260, PCBs by EPA Method 8082A, Total RCRA Metals + Copper, Nickel, and Zinc, and TCLP RCRA 8 metals.

Based on the statistical analysis, the mean TCLP concentration of all RCRA 8 metals were below their respective thresholds for the toxicity characteristic. In addition, the mean PCB concentration of the area wide dust and fine particles was shown to be 0.83 mg/kg. Analysis did identify low level trace VOCs listed in 40 CFR 261.31 (and WAC 173-303-9904), Wastes from Non-Specific Sources. The concentration of VOCs did not approach TCLP volatiles characteristic levels and none of the original processes generating any of the trace constituents in question are known therefore RCRA F Series is not applicable.



After the laboratory results were received, A Washington State Toxic Criteria book designation calculation was performed for each of the 22 samples taken throughout the facility. All samples had an Equivalent Concentration (EC) between 0.001% and 1.0%, resulting in a book designation of Toxic, WT02. This book designation was refuted by a follow-up fish bioassay in accordance with WAC 173-303-110(3)(b). The two area wide samples with the highest EC calculation were selected for fish bioassay analysis by Ecology Method 80-1, Biological Testing Methods for the Designation of Dangerous Waste. The fish bioassays resulted in zero fish mortality and therefore the WT02 designation was refuted.

Based on the statistical analysis of total metals, TCLP metals, PCBs and VOCs, the area wide dust has been designed as Non-Dangerous Solid Waste. Further details about the sampling plan design are included in the SAP. In addition, the designation package for the area wide dust is included in Attachment X. This designation is meant to apply to dust, fine particles, and above ground exposed soil remaining in the forge Shop, melt shop, and heat treat shop areas in the main facility structure. During the course of demolition and site stabilization, this media may need to be removed and disposed of off-site for several reasons including stormwater pollutant source control, dust control, and surface preparation for asphalt application to stabilize areas of exposed soil.

Attachments:

- ☒ Field Report
- ☒ Photo Log
- ☒ Laboratory Data (OnSite Environmental Lab Report 2006-002, 2006-002B)
- ☒ Dangerous Waste Toxic Equivalent Concentration Calculation
- ☒ Biological Testing Method 80-12 (Fish Bioassay)
- ☒ Other: Visual Sample Plan Output

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-Hazardous Solid Waste

Designation Performed by: Stacy Fox, CHMM
Title: Senior Project Scientist

Date: 06-23-2020

Designation Reviewed by: David Hill, PE, CHMM, CPEA
Title: Principal Engineer

Date: 06-23-2020



1011 SW KICKITAT WAY
SUITE 107
SEATTLE, WASHINGTON 98134

FIELD REPORT

File Name:
FR_Area Wide_06012020

Project:
Star Forge Area-Wide Waste Designation Sampling

Date:
6/1/2020

Owner:
Star Forge

Time of Arrival:
0600

Report Number:
1

Prepared by:
Nathan Moxley

Location:
8531 E. Marginal Way

Time of Departure:
1130

Page:
Page 1 of 2

Purpose of Site Visit:
Waste Designation Sampling

Weather:
Indoors

Travel/Prep. Time:
3 hr

Project/Contract Number:
Work Order 03 – Clean Closure

Upon arrival to the site I assessed personal safety hazards: ☒ Yes or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable
Safety Hazards Were Addressed by: ☒ Performing tool box safety meeting ☒ Donning PPE, and observing safety standards

Site Visit Purpose and Details:

To collect samples across the former Melt Shop, Forge Shop, and southern portions of the Heat Treat Area. Samples are being collected in accordance with the Area-Wide sampling plan, and VSP sample design guidance for random sampling of dust throughout the facility.

Summary of Field Activities:

Nathan Moxley and Brian Johnson of DH Environmental arrived onsite at approximately 0600. Upon arrival we conducted a health and safety tailgate meeting and unloaded sampling equipment. Sampling locations were pre-determined by VSP. Using a measuring wheel, we started locating the sample stations based on the proximity to known site features and using the coordinates of each sample, as provided by VSP.

Adequate dust and/or mixed soil and debris were present at all stations within a few feet of the planned sample location, with the following exceptions:

- Station AW-17 was incorrectly plotted outside of the building footprint in the VSP sample design, approximately 41-feet west of the building. The station was moved approximately 51-feet east from the planned location to fall within the building footprint, and located near a small pile of dust and debris approximately 10-feet east of the western wall of the building.
- Station AW-5 was shifted south against the edge of the building to target a pile of loose metal-like dust.
- Station AW-15 was shifted north against the north edge of the building to target a pile of dust that had accumulated in the corner against a column footing and drain pipe.
- Station AW-16 was shifted ~10-ft west of the planned location to target dust that had accumulated in a recessed trackway in the concrete floor

Following the collection of each sample, the sample location was marked and labeled with marking paint, and a photo taken. Photos are provided in attached photo log.

☒ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Field Representative certifies the report was prepared with the intent to portray a true and accurate representation of the work performed or the observations made.

FIELD REPRESENTATIVE:
Nathan Moxley, LG, LHG

DATE:
06/01/2020

☐ **THIS FIELD REPORT IS FINAL** This report presents observations and/or a record of field activities of the work performed. The Reviewer certifies the report has been reviewed and is ready for release to the Client to support work product and/or deliverables without exception.

REVIEWED BY:
Stacy Fox, CHMM

DATE:
6/5/2020

This report presents observations and a record of field activities relating to our services only. Other work may have been performed on this project that was not under the direction or guidance of DH Environmental, Inc. Our work did not include supervision or direction of the work of others. DH Environmental, Inc. is not responsible for job or site safety of others on this project. DISCLAIMER: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by DH Environmental, Inc. and will serve as the official document of record.

ATTACHMENTS:

- ☒ Site Photos ☐ Sketch ☐ Chain of Custody ☐ Other:
☐ Sample Log ☐ Drawing(s) ☐ Calibration Records

Photo Log
Area Wide Waste Designation Sampling
6/1/2020
Star Forge, Tukwila, Washington



Photo 1: Sample location AW-1.



Photo 2: Sample location AW-2.



Photo 3: Sample location AW-3.



Photo 4: Sample location AW-4.



Photo 5: Sample location AW-5.



Photo 6: Sample location AW-6.



Photo 7: Sample location AW-7.



Photo 8: Sample location AW-8.



Photo 9: Sample location AW-9.



Photo 10: Sample location AW-10.



Photo 11: Sample location AW-11.



Photo 12: Sample location AW-12.



Photo 13: Sample location AW-13.



Photo 14: Sample location AW-14.

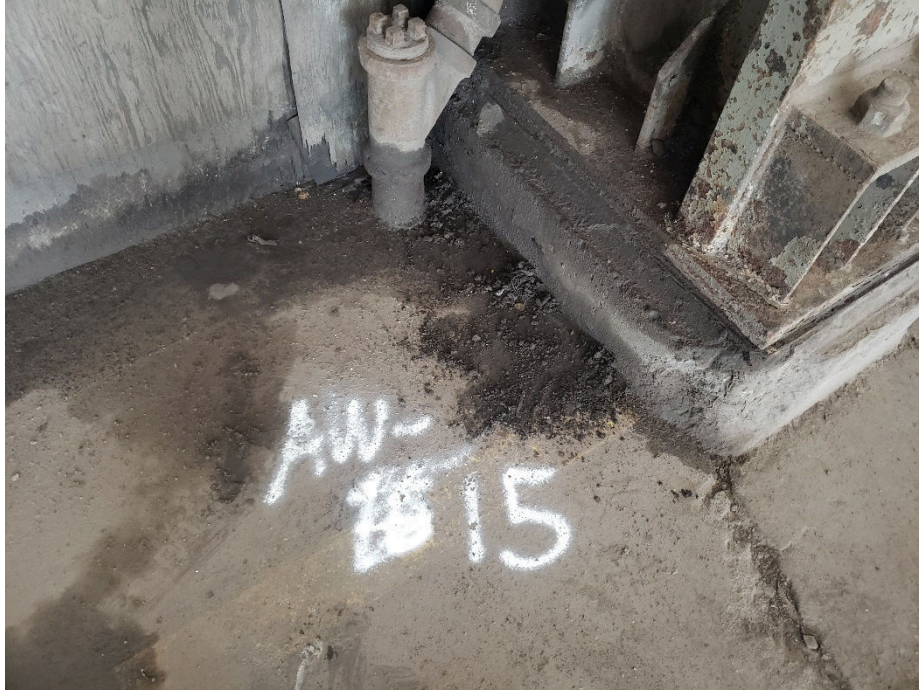


Photo 15: Sample location AW-15.

Photo 16: Sample location AW-16 (no photo).



Photo 17: Sample location AW-17.



Photo 18: Sample location AW-18.



Photo 19: Sample location AW-19.



Photo 20: Sample location AW-20.



Photo 21: Sample location AW-21.



Photo 22: Sample location AW-22.

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-1' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	17	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.70E-03		
Barium	7440-39-3	90	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	4.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	4.20E-04				
Chromium	7440-47-3	2300	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.30E-01	
Copper	7440-50-8	690	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		6.90E-02			
Lead	7439-92-1	1400	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.40E-01	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	2300	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.30E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	390	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.90E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.053	LC Rat Inhalation 50.10 mg/kg ¹	D					5.30E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-1' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.082	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		8.20E-06	
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B			
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-1' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0004200	0.0690000	0.0407082	0.3700000	0.2300

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	4.20E-04	6.90E-02	4.07E-02	3.70E-01	2.30E-01		
	4.20E-04	6.90E-03	4.07E-04	3.70E-04	2.30E-05	0.0081201	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-2' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	16	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.60E-03		
Barium	7440-39-3	140	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	2.9	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.90E-04				
Chromium	7440-47-3	1100	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.10E-01	
Copper	7440-50-8	650	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		6.50E-02			
Lead	7439-92-1	190	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.90E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	710	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.10E-02
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	550	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			5.50E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.019	LC Rat Inhalation 50.10 mg/kg ¹	D					1.90E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	0.0028	LD50 Rat oral 4750 mg/kg ²	D				2.80E-07
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	0.096	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			9.60E-06	
Aroclor 1268	11096-82-5	0.5	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B			5.00E-05	
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-2' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002900	0.0650000	0.0566596	0.1290000	0.0710

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.90E-04	6.50E-02	5.67E-02	1.29E-01	7.10E-02		
	2.90E-04	6.50E-03	5.67E-04	1.29E-04	7.10E-06	0.0074927	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-3' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor		1 mg/kg = 10 ⁻⁴ %				
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	50	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			5.00E-03		
Barium	7440-39-3	99	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	2.8	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.80E-04				
Chromium	7440-47-3	5400	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.40E-01	
Copper	7440-50-8	2300	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		2.30E-01			
Lead	7439-92-1	310	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				3.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	6400	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					6.40E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	590	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			5.90E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.045	LC Rat Inhalation 50.10 mg/kg ¹	D					4.50E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0034	LD50 Oral Rat 1200 mg/kg ¹	D					3.40E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-3' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.28	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		2.80E-05	
Aroclor 1260	11096-82-5	0.12	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		1.20E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-3' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002800	0.2300000	0.0640400	0.5710000	0.6400

Enter Category Mass % Here →		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
		2.80E-04	2.30E-01	6.40E-02	5.71E-01	6.40E-01		
		2.80E-04	2.30E-02	6.40E-04	5.71E-04	6.40E-05	0.0245554	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-4' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	15	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.50E-03		
Barium	7440-39-3	80	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	2.6	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.60E-04				
Chromium	7440-47-3	10000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.00E+00	
Copper	7440-50-8	380	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		3.80E-02			
Lead	7439-92-1	150	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.50E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	2600	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.60E-01
Selenium	7782-49-2	16	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					1.60E-03
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	1200	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.20E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-4' (Lab Report 2006-002)
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

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Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002600	0.0380000	0.1215000	1.0150000	0.2616

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.60E-04	3.80E-02	1.22E-01	1.02E+00	2.62E-01		
	2.60E-04	3.80E-03	1.22E-03	1.02E-03	2.62E-05	0.0063162	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-5' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	65	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			6.50E-03		
Barium	7440-39-3	20	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	nd	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	70000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				7.00E+00	
Copper	7440-50-8	1400	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		1.40E-01			
Lead	7439-92-1	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	13000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.30E+00
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	230	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.30E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.038	LC Rat Inhalation 50.10 mg/kg ¹	D					3.80E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.0064	LD50 Oral Rat 2737 mg/kg ¹	D					6.40E-07
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-5' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Applicable Sample IDs: 'AW-5' (Lab Report 2006-002, 2006-002B)
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.1400000	0.0295000	7.0110000	1.3000

Enter Category Mass % Here →										
	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation			
	0.00E+00	1.40E-01	2.95E-02	7.01E+00	1.30E+00					
	0.00E+00	1.40E-02	2.95E-04	7.01E-03	1.30E-04					
						0.0214360	WT02			

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: "AW-6" (Lab Report 2006-002)
Sample Date: 06-01-2020
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1 ng/kg = 10⁻⁶-10 % (mass %)
Conversions 1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	54	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			5.40E-03		
Barium	7440-39-3	60	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	0.54	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	5.40E-05				
Chromium	7440-47-3	2000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.00E-01	
Copper	7440-50-8	1200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		1.20E-01			
Lead	7439-92-1	200	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.00E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	3800	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.80E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	260	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.60E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ¹	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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Sample Date: 06-01-2020
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(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 <i>Salmo gairdneri</i> (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 <i>Poecilia reticulata</i> (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 <i>Pimephales promelas</i> (fathead minnow) 7.720 mg/l/96 hr ²	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 <i>Salmo clarki</i> (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	0.13	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout) 156 ug/L 120 hr ²	B		1.30E-05		
Aroclor 1268	11096-82-5	0.085	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout) >232 ug/L for 96 hr ²	B		8.50E-06		
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	0.047	LC50 <i>Oncorhynchus gorbuscha</i> (pink salmon) 1.4 mg/L/96 hr ²	C			4.70E-06	
2-methylnaphthalene	91-57-6	0.085	1630 mg/kg Oral Rat LD50 ²	D				8.50E-06
1-methylnaphthalene	90-12-0	0.061	1840 mg/kg Oral Rate LD50 ²	D				6.10E-06
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l/ 24-hr ²	C				
Acenaphthene	83-32-9	0.036	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 1570 ug/L 96hr ³	C			3.60E-06	
Fluorene	86-73-7	0.067	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 820 ug/L 96hr ³	B		6.70E-06		
Phenanthrene	85-01-8	0.25	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.50E-05		

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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Sample Date: 06-01-2020
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Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	0.11	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				1.10E-05	
Pyrene	129-00-0	0.15	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C				1.50E-05	
Benzo(a)anthracene	56-55-3	0.053	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				5.30E-06	
Chrysene	218-01-9	0.1	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				1.00E-05	
Benzo(a)anthracene (total)	(205-99-2) (207-08-9)	0.082	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				8.20E-06	
Benzo(a)pyrene	50-32-8	0.039	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.90E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.038	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.80E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.041	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.10E-06	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ⁴	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000540	0.1200250	0.0314282	0.2200696	0.3800

Enter Category Mass % Here	→	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
		5.40E-05	1.20E-01	3.14E-02	2.20E-01	3.80E-01		
		5.40E-05	1.20E-02	3.14E-04	2.20E-04	3.80E-05	0.0126289	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: "AW-6" (Lab Report 2006-002)
Sample Date: 06-01-2020
Book Designation by: Stacy Fox

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-7' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	19	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.90E-03		
Barium	7440-39-3	86	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	2300	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.30E-01	
Copper	7440-50-8	630	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		6.30E-02			
Lead	7439-92-1	130	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.30E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	3500	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.50E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	170	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.70E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ⁴	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-7' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-7' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.0630000	0.0189000	0.2430000	0.3500

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	6.30E-02	1.89E-02	2.43E-01	3.50E-01		
	0.00E+00	6.30E-03	1.89E-04	2.43E-04	3.50E-05	0.0067670	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-8 (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	55	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			5.50E-03		
Barium	7440-39-3	160	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	33	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	3.30E-03				
Chromium	7440-47-3	5900	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.90E-01	
Copper	7440-50-8	2200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		2.20E-01			
Lead	7439-92-1	4200	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.20E-01	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	3700	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.70E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	8500	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			8.50E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ²	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0033000	0.2200000	0.8555000	1.0100000	0.3700

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	3.30E-03	2.20E-01	8.56E-01	1.01E+00	3.70E-01		
	3.30E-03	2.20E-02	8.56E-03	1.01E-03	3.70E-05	0.0349020	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-9' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
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1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

		Units Displayed as	mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %				
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	45	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			4.50E-03		
Barium	7440-39-3	97	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	6.5	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	6.50E-04				
Chromium	7440-47-3	4000	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				4.00E-01	
Copper	7440-50-8	1900	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.90E-01			
Lead	7439-92-1	410	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	5800	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					5.80E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	400	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			4.00E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	0.0095	LD50 Oral Rat 352 mg/kg ¹	C				9.50E-07	
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.010	LC Rat Inhalation 50.10 mg/kg ¹	D					1.00E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-9' (Lab Report 2006-002, 2006-002B)
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	0.078	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A	7.80E-06		
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.23	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		2.30E-05	
Aroclor 1268	11096-82-5	0.39	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		3.90E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-9' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0006500	0.1900078	0.0445620	0.4410010	0.5800

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	6.50E-04	1.90E-01	4.46E-02	4.41E-01	5.80E-01		
	6.50E-04	1.90E-02	4.46E-04	4.41E-04	5.80E-05	0.0205954	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-10' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	29	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.90E-03		
Barium	7440-39-3	13	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	4200	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				4.20E-01	
Copper	7440-50-8	2800	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		2.80E-01			
Lead	7439-92-1	84	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				8.40E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	8600	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					8.60E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	120	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.20E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.2800000	0.0149000	0.4284000	0.8600

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.80E-01	1.49E-02	4.28E-01	8.60E-01		
	0.00E+00	2.80E-02	1.49E-04	4.28E-04	8.60E-05	0.0286634	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-11' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	23	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.30E-03		
Barium	7440-39-3	48	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	8800	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				8.80E-01	
Copper	7440-50-8	1400	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		1.40E-01			
Lead	7439-92-1	66	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				6.60E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	6600	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					6.60E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	170	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.70E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-11' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-11' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-002-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.1400000	0.0193000	0.8866000	0.6600

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	1.40E-01	1.93E-02	8.87E-01	6.60E-01		
	0.00E+00	1.40E-02	1.93E-04	8.87E-04	6.60E-05	0.0151456	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-12' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻¹⁰ % (mass %)
 Conversions 1 ug/kg = 10⁻⁷ %
 1 mg/kg = 10⁻⁴ %

Units Displayed as			mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %				
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	19	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.90E-03		
Barium	7440-39-3	140	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	2.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.20E-04				
Chromium	7440-47-3	9400	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				9.40E-01	
Copper	7440-50-8	1100	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.10E-01			
Lead	7439-92-1	220	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.20E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	2400	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.40E-01
Selenium	7782-49-2	27	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					2.70E-03
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	620	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			6.20E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	0.018	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			1.80E-06	
2-methylnaphthalene	91-57-6	0.0093	1630 mg/kg Oral Rat LD50 ²	D				9.30E-07
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	0.051	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		5.10E-06		
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	0.065	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				6.50E-06	
Pyrene	129-00-0	0.038	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C				3.80E-06	
Benzo(a)anthracene	56-55-3	0.015	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.50E-06	
Chrysene	218-01-9	0.038	LC50 Nematodes arenaceodentata (fish) > 1 mg/L96 hr	C				3.80E-06	
Benzo(a)pyrene	(205-99-2) (207-08-9)	0.026	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.60E-06	
Benzo(a)pyrene	50-32-8	0.013	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.30E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.013	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.30E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.015	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.50E-06	
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002200	0.1100051	0.0639000	0.9620241	0.2427

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.20E-04	1.10E-01	6.39E-02	9.62E-01	2.43E-01		
	2.20E-04	1.10E-02	6.39E-04	9.62E-04	2.43E-05	0.0128458	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-13' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	37	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			3.70E-03		
Barium	7440-39-3	57	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	4700	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				4.70E-01	
Copper	7440-50-8	1500	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		1.50E-01			
Lead	7439-92-1	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	7400	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					7.40E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	170	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.70E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.024	LC Rat Inhalation 50.10 mg/kg ¹	D					2.40E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-13' (Lab Report 2006-002, 2006-002B)
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.079	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		7.90E-06	
Aroclor 1268	11096-82-5	0.16	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		1.60E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-13' (Lab Report 2006-002, 2006-002B)
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Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.1500000	0.0207239	0.4810000	0.7400

Enter Category Mass % Here →		ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
		0.00E+00	1.50E-01	2.07E-02	4.81E-01	7.40E-01		
		0.00E+00	1.50E-02	2.07E-04	4.81E-04	7.40E-05	0.0157622	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	15	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.50E-03		
Barium	7440-39-3	150	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	3.3	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	3.30E-04				
Chromium	7440-47-3	2700	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.70E-01	
Copper	7440-50-8	510	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		5.10E-02			
Lead	7439-92-1	190	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.90E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	1700	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.70E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	290	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.90E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.044	LC Rat Inhalation 50.10 mg/kg ¹	D					4.40E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.0079	LD50 Oral Rat 2737 mg/kg ¹	D					7.90E-07
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					

Project: Star Forge, Former Jorgenson Forge Property
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Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthus arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0003300	0.0510000	0.0305000	0.2890000	0.1700

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	3.30E-04	5.10E-02	3.05E-02	2.89E-01	1.70E-01		
	3.30E-04	5.10E-03	3.05E-04	2.89E-04	1.70E-05	0.0060410	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-15' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	41	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			4.10E-03		
Barium	7440-39-3	680	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	46	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	4.60E-03				
Chromium	7440-47-3	4200	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				4.20E-01	
Copper	7440-50-8	1700	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.70E-01			
Lead	7439-92-1	2400	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.40E-01	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	3200	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.20E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	17	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X	1.70E-03				
Zinc	7440-66-6	3200	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.20E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-15' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	0.11	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A	1.10E-05		
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.99	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		9.90E-05	
Aroclor 1260	11096-82-5	0.23	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		2.30E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-15' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0063000	0.1700110	0.3242220	0.6600000	0.3200

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	6.30E-03	1.70E-01	3.24E-01	6.60E-01	3.20E-01		
	6.30E-03	1.70E-02	3.24E-03	6.60E-04	3.20E-05	0.0272353	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-16' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
mg/kg		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	42	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			4.20E-03		
Barium	7440-39-3	83	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	6.4	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	6.40E-04				
Chromium	7440-47-3	7700	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				7.70E-01	
Copper	7440-50-8	3200	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		3.20E-01			
Lead	7439-92-1	300	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				3.00E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	8000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					8.00E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	990	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ²	B			9.90E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.011	LD50 Oral Rat 1200 mg/kg ¹	D					1.10E-06
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-16' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.42	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		4.20E-05	
Aroclor 1268	11096-82-5	0.37	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		3.70E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-16' (Lab Report 2006-002, 2006-002B)
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Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0006400	0.3200000	0.1032790	0.8000000	0.8000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	6.40E-04	3.20E-01	1.03E-01	8.00E-01	8.00E-01		
	6.40E-04	3.20E-02	1.03E-03	8.00E-04	8.00E-05	0.0345528	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-20' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	110	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.10E-02		
Barium	7440-39-3	300	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	7.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	7.20E-04				
Chromium	7440-47-3	2800	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				2.80E-01	
Copper	7440-50-8	2600	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		2.60E-01			
Lead	7439-92-1	820	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				8.20E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	1900	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					1.90E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	1700	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.70E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.10	LC Rat Inhalation 50.10 mg/kg ¹	D					1.00E-05
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	0.0012	LD50 Oral Rat 1200 mg/kg ¹	D					1.20E-07
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.017	LD50 Oral Rat 2737 mg/kg ¹	D					1.70E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	0.00091	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				9.10E-08	
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	0.0050	LD50 Rat oral 4600 mg/kg ²	D					5.00E-07
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-20' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	0.0057	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			5.70E-07	
m,p-Xylene	108-38-3, 106-42-3	0.15	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			1.50E-05	
o-Xylene	95-47-6	0.051	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			5.10E-06	
Styrene	100-42-5	0.0075	LC50 Rat Inhalation 0.18 mg/kg ³	A		7.50E-07		
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	0.0010	1400 mg/kg Oral Rat LD50 ²	D				1.00E-07
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	1.5	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			1.50E-04	
Aroclor 1268	11096-82-5	11	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B			1.10E-03	
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0007200	0.2600008	0.1822500	0.3620208	0.1900

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	7.20E-04	2.60E-01	1.82E-01	3.62E-01	1.90E-01		
	7.20E-04	2.60E-02	1.82E-03	3.62E-04	1.90E-05	0.0289236	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

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1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	14	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.40E-03		
Barium	7440-39-3	75	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	390	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				3.90E-02	
Copper	7440-50-8	2900	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		2.90E-01			
Lead	7439-92-1	53	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				5.30E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	4400	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					4.40E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	93	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			9.30E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.040	LC Rat Inhalation 50.10 mg/kg ¹	D					4.00E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.0070	LD50 Oral Rat 2737 mg/kg ¹	D					7.00E-07
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncoerhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncoerhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

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Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0000000	0.2900000	0.0107000	0.0443000	0.4400

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	0.00E+00	2.90E-01	1.07E-02	4.43E-02	4.40E-01		
	0.00E+00	2.90E-02	1.07E-04	4.43E-05	4.40E-05	0.0291953	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-19' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	39	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			3.90E-03		
Barium	7440-39-3	310	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	7.4	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	7.40E-04				
Chromium	7440-47-3	6100	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				6.10E-01	
Copper	7440-50-8	1800	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.80E-01			
Lead	7439-92-1	720	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				7.20E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	0.58	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A		5.80E-05			
Nickel	7440-02-0	3900	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					3.90E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	13	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X	1.30E-03				
Zinc	7440-66-6	1900	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.90E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-19' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.17	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.70E-05	
Aroclor 1260	11096-82-5	0.11	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		1.10E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-19' (Lab Report 2006-002)
Sample Date: 06-01-20
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0020400	0.1800580	0.1939280	0.6820000	0.3900

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.04E-03	1.80E-01	1.94E-01	6.82E-01	3.90E-01		
	2.04E-03	1.80E-02	1.94E-03	6.82E-04	3.90E-05	0.0227061	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-20' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	47	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			4.70E-03		
Barium	7440-39-3	110	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	1.8	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	1.80E-04				
Chromium	7440-47-3	2900	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.90E-01	
Copper	7440-50-8	1700	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.70E-01			
Lead	7439-92-1	480	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.80E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	5000	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					5.00E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	340	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.40E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.084	LC Rat Inhalation 50.10 mg/kg ¹	D					8.40E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	0.014	LD50 Oral Rat 2737 mg/kg ¹	D					1.40E-06
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ²	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	0.0062	LD50 Rat oral 4600 mg/kg ²	D					6.20E-07
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.14	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.40E-05	
Aroclor 1268	11096-82-5	0.10	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		1.00E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Nematodes arenaceodentata (fish) > 1 mg/L 96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0001800	0.1700000	0.0387240	0.3380000	0.5000

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	1.80E-04	1.70E-01	3.87E-02	3.38E-01	5.00E-01		
	1.80E-04	1.70E-02	3.87E-04	3.38E-04	5.00E-05	0.0179552	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-21' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
 Conversions 1 ug/kg = 10⁻⁶-7 %
 1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	32	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			3.20E-03		
Barium	7440-39-3	1900	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	2.2	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	2.20E-04				
Chromium	7440-47-3	1700	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ²	C				1.70E-01	
Copper	7440-50-8	550	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ⁴	A		5.50E-02			
Lead	7439-92-1	210	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	2300	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					2.30E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	260	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			2.60E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ²	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ²	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-21' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C				
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A				
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A				
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B				
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B				
PAHs by EPA 8270D/SIM								
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C				
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D				
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D				
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B				
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A				
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X				

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-21' (Lab Report 2006-002, 2006-002B)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

Fluoranthene	206-44-0	--	LC50 <i>Lepomis macrochirus</i> (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 <i>Neanthes arenaceodentata</i> (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 <i>Poeciliopsis lucida</i> (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS "Lube Oil" Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 <i>Oryzias latipes</i> (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0002200	0.0550000	0.0292000	0.1910000	0.2300

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	2.20E-04	5.50E-02	2.92E-02	1.91E-01	2.30E-01		
	2.20E-04	5.50E-03	2.92E-04	1.91E-04	2.30E-05	0.0062260	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
Applicable Sample IDs: 'AW-22' (Lab Report 2006-002)
Sample Date: 06-01-20
Book Designation by: Stacy Fox

1 ng/kg = 10⁻⁶-10⁻⁷ % (mass %)
Conversions 1 ug/kg = 10⁻⁶-7 %
1 mg/kg = 10⁻⁴-4 %

Units Displayed as		mg/kg	Conversion Factor	1 mg/kg = 10 ⁻⁴ %					
0.0001									
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	21	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			2.10E-03		
Barium	7440-39-3	460	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	10	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	1.00E-03				
Chromium	7440-47-3	2100	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.10E-01	
Copper	7440-50-8	1600	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ²	A		1.60E-01			
Lead	7439-92-1	1000	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.00E-01	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	0.37	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A		3.70E-05			
Nickel	7440-02-0	970	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	D					9.70E-02
Selenium	7782-49-2	27	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					2.70E-03
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	3000	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			3.00E-01		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ¹	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	0.055	LC Rat Inhalation 50.10 mg/kg ¹	D					5.50E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	0.0026	LD50 Rabbit Dermal 20 mg/kg ³	B			2.60E-07		
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	0.0024	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				2.40E-07	
1,2-Dichloroethane	107-06-2	0.0055	LD50 Rat oral 670-890 mg/kg ²	D					5.50E-07
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ³	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					

Project: Star Forge, Former Jorgenson Forge Property
Waste Stream: Dust
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Sample Date: 06-01-20
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1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D			
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C			
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D			
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D			
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C			
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C			
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C			
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D			
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C			
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C			
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C			
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A			
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C			
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D			
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D			
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C			
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C			
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE			
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D			
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat 1600 mg/kg ²	D			
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ²	D			
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D			
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ²	C			
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D			
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D			
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D			
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C			
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C			
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D			
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C			
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D			
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C			
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C			
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D			
PCBs by EPA 8082A							
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B			
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C			
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C			
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A			
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A			
Aroclor 1254	11097-69-1	0.17	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B		1.70E-05	
Aroclor 1260	11096-82-5	0.17	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B		1.70E-05	
PAHs by EPA 8270D/SIM							
Naphthalene	91-20-3	--	LC50 Oncorhynchus gorbusha (pink salmon) 1.4 mg/L/96 hr ²	C			
2-methylnaphthalene	91-57-6	--	1630 mg/kg Oral Rat LD50 ²	D			
1-methylnaphthalene	90-12-0	--	1840 mg/kg Oral Rate LD50 ²	D			
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C			
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C			
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A			
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X			

Project: Star Forge, Former Jorgenson Forge Property
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Sample Date: 06-01-20
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Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ²	C					
Benzo(a)anthracene	56-55-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	--	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C					
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(a)pyrene	50-32-8	--	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Indeno(1,2,3-cd)pyrene	193-39-5	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Petroleum Hydrocarbons									
Mineral Spirits (Stoddard Solvent)	8052-41-3	--	LD50 Oral Rat 5000 mg/kg ¹	D					
Diesel Range	68334-30-5	--	TAKEN AS DIESEL: 7500 mg/kg Oral Rat LD50 ¹	Not Applicable					
Heavy Hydrocarbon Range (Lube Oil Range)	64742-65-0	--	TAKEN AS Lube Oil Range: > 5000 mg/kg Oral Rat LD50 ¹	Not Applicable					
GLYCOLS									
Ethylene Glycol MHE	107-21-1	--	LD50 Oral Rat 4700 mg/kg ²	D					
Diethylene Glycol MBE	111-46-6	--	LD50 Rabbit dermal 11,890 mg/kg ²	D					
Propylene Glycol	57-55-6	--	LD50 Rat oral 22,000 mg/kg ²	NOT APPLICABLE					
DIOXINS/FURANS									
1,2,3,4,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	--	1 mg/kg Oral Rat LD50 ²	A					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	--	6.325 mg/kg Oral Rat LD50 ¹	B					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	--	0.825 mg/kg Oral Rat LD50 ¹	A					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	--	0.25 mg/kg Oral Rat LD50 ¹	X					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	--	1.8 mg/kg Oral Rat LD50 ²	A					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	--	LC50 Oryzias latipes (Medaka, high-eyes) 0.027 (0.023-0.031) ug/L ³	X					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	--	NO DATA AVAILABLE - ASSIGNED TO TOXIC CATEGORY X	X					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	--	0.916 mg/kg Oral Rat LD50 ¹	A					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	--	0.022 mg/kg Dermal Rabbit LD50 ²	X					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	--	1.0 mg/kg Oral Rat LD50 ¹	A					
Total (SUM)					0.0010000	0.1600370	0.3021343	0.3100002	0.0997

Enter Category Mass % Here	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000	EC	Designation
	1.00E-03	1.60E-01	3.02E-01	3.10E-01	9.97E-02		
	1.00E-03	1.60E-02	3.02E-03	3.10E-04	9.97E-06	0.0203450	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

*Concentration assumed from highest possible value from all samples

Random sampling locations for comparing a median with a fixed threshold (nonparametric - MARSSIM)

Summary

This report summarizes the sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan.

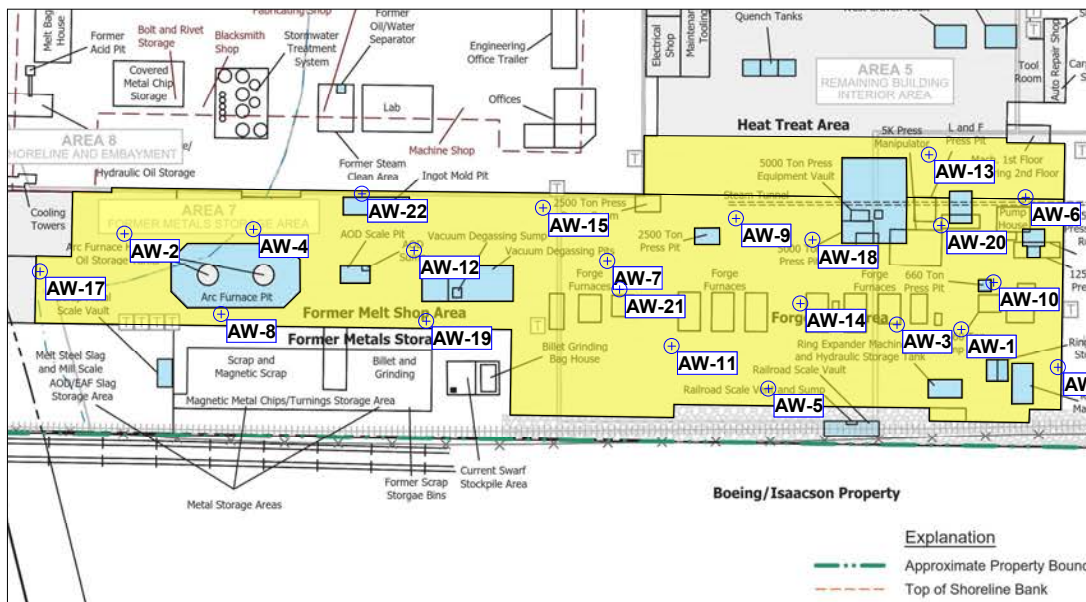
The following table summarizes the sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Compare a site mean or median to a fixed threshold
Type of Sampling Design	Nonparametric
Sample Placement (Location) in the Field	Simple random sampling
Working (Null) Hypothesis	The median(mean) value at the site exceeds the threshold
Formula for calculating number of sampling locations	Sign Test - MARSSIM version
Calculated number of samples	18
Number of samples adjusted for EMC	18
Number of samples with MARSSIM Overage	22
Number of samples on map ^a	22
Number of selected sample areas ^b	1
Specified sampling area ^c	159472.83 ft ²

^a This number may differ from the calculated number because of 1) grid edge effects, 2) adding judgment samples, or 3) selecting or unselecting sample areas.

^b The number of selected sample areas is the number of colored areas on the map of the site. These sample areas contain the locations where samples are collected.

^c The sampling area is the total surface area of the selected colored sample areas on the map of the site.



Area: melt/forge shops						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-92.8	74.8	AW-1	0.082	Random		
-871.4	163.8	AW-2	0.596	Random		
-152.7	79.2	AW-3	0.4	Random		
-751.6	168.2	AW-4	0.052	Random		
-272.5	19.8	AW-5	0.05	Random		
-32.9	197.9	AW-6	0.215	Random		
-422.2	138.5	AW-7	0.053	Random		
-781.6	89.1	AW-8	0.063	Random		
-302.5	178.1	AW-9	0.698	Random		
-62.9	118.7	AW-10	0.051	Random		
-362.3	59.4	AW-11	0.054	Random		
-601.9	148.4	AW-12	0.054	Random		
-122.8	237.4	AW-13	0.239	Random		
-242.6	99.0	AW-14	0.059	Random		
-482.1	188.0	AW-15	1.33	Random		
-3.0	39.6	AW-16	0.79	Random		
-950.0	128.6	AW-17	12.5	Random		
-231.3	158.3	AW-18	0.052	Random		
-590.7	82.5	AW-19	0.28	Random		
-111.5	171.5	AW-20	0.24	Random		
-411.0	112.1	AW-21	0.053	Random		
-650.6	201.2	AW-22	0.34	Random		

Primary Sampling Objective

The primary purpose of sampling at this site is to compare a site median or mean value with a fixed threshold. The working hypothesis (or 'null' hypothesis) is that the median(mean) value at the site is equal to or exceeds the threshold. The alternative hypothesis is that the median(mean) value is less than the threshold. VSP calculates the number of samples required to reject the null hypothesis in favor of the alternative one, given a selected sampling approach and inputs to the associated equation.

Selected Sampling Approach

A nonparametric random sampling approach was used to determine the number of samples and to specify sampling locations. A nonparametric formula was chosen because the conceptual model and historical information (e.g., historical data from this site or a very similar site) indicate that typical parametric assumptions may not be true.

Both parametric and non-parametric equations rely on assumptions about the population. Typically, however, non-parametric equations require fewer assumptions and allow for more uncertainty about the statistical distribution of values at the site. The trade-off is that if the parametric assumptions are valid, the required number of samples is usually less than if a non-parametric equation was used.

VSP offers many options to determine the locations at which measurements are made or samples are collected and subsequently measured. For this design, simple random point sampling was chosen. Locating the sample points randomly provides data that are separated by varying distances, providing good information about the spatial structure of the potential contamination. Knowledge of the spatial structure is useful for geostatistical analysis. However, it may not ensure that all portions of the site are equally represented.

Number of Total Samples: Calculation Equation and Inputs

The equation used to calculate the number of samples is based on a Sign test (see PNNL 13450 for discussion). For this

site, the null hypothesis is rejected in favor of the alternative one if the median(mean) is sufficiently smaller than the threshold. The number of samples to collect is calculated so that if the inputs to the equation are true, the calculated number of samples will cause the null hypothesis to be rejected.

The formula used to calculate the number of samples is:

$$n = \frac{(Z_{1-\alpha} + Z_{1-\beta})^2}{4(\text{SignP} - 0.5)^2}$$

where

$$\text{SignP} = \Phi\left(\frac{\Delta}{S_{total}}\right)$$

$\Phi(z)$ is the cumulative standard normal distribution on $(-\infty, z)$ (see PNNL-13450 for details),

n is the number of samples,

S_{total} is the estimated standard deviation of the measured values including analytical error,

Δ is the width of the gray region,

α is the acceptable probability of incorrectly concluding the site median(mean) is less than the threshold,

β is the acceptable probability of incorrectly concluding the site median(mean) exceeds the threshold,

$Z_{1-\alpha}$ is the value of the standard normal distribution such that the proportion of the distribution less than $Z_{1-\alpha}$ is $1-\alpha$,

$Z_{1-\beta}$ is the value of the standard normal distribution such that the proportion of the distribution less than $Z_{1-\beta}$ is $1-\beta$.

Note: MARSSIM suggests that the number of samples should be increased by at least 20% to account for missing or unusable data and uncertainty in the calculated value of n . VSP allows a user-supplied percent overage as discussed in MARSSIM (EPA 2000, p. 5-33).

For each nuclide in the table, the values of these inputs that result in the calculated number of sampling locations are:

Nuclide	n^a	n^b	n^c	Parameter					
				S_{total}	Δ	α	β	$Z_{1-\alpha}^d$	$Z_{1-\beta}^e$
PCB	0	0	0		5	0.05	0.05	1.64485	1.64485
Barium	0	0	0		10	0.05	0.05	1.64485	1.64485
Cadmium	0	0	0		0.2	0.05	0.05	1.64485	1.64485
Chromium	0	0	0		1	0.05	0.05	1.64485	1.64485
Lead	18	18	22	0.8	1	0.05	0.05	1.64485	1.64485

^a The number of samples calculated by the formula.

^b The number of samples increased by EMC calculations.

^c The final number of samples increased by the MARSSIM Overage of 20%.

^d This value is automatically calculated by VSP based upon the user defined value of α .

^e This value is automatically calculated by VSP based upon the user defined value of β .

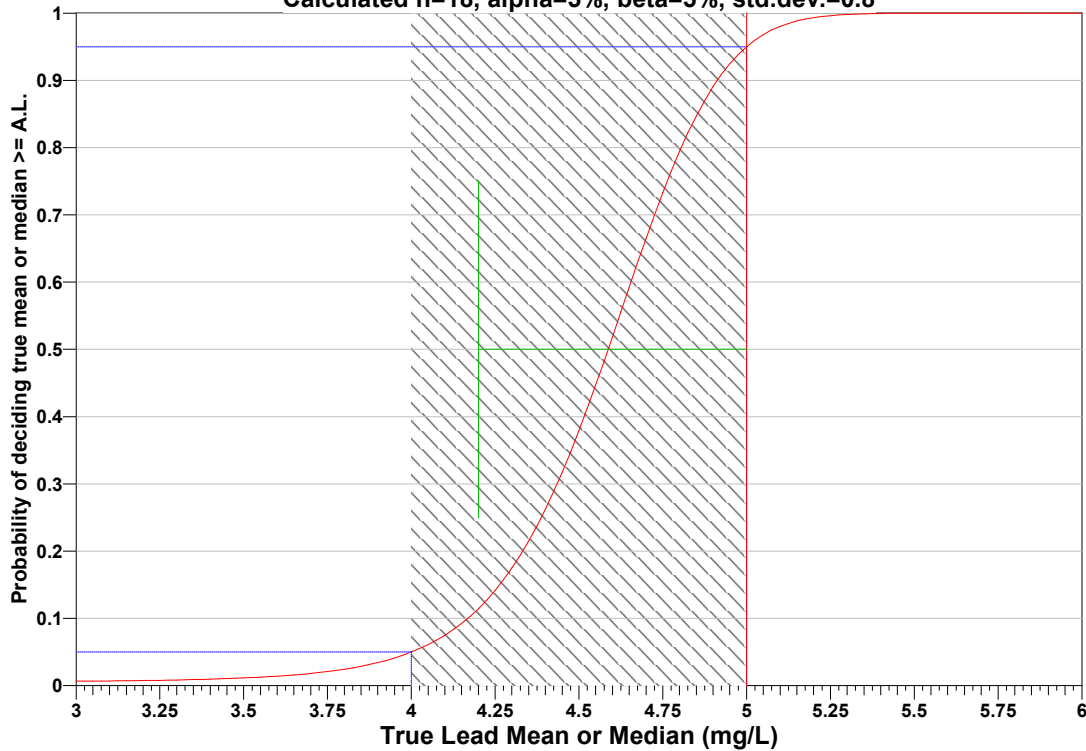
Performance

The following figure is a performance goal diagram, described in EPA's QA/G-4 guidance (EPA, 2000). It shows the probability of concluding the sample area is dirty on the vertical axis versus a range of possible true median(mean) values for the site on the horizontal axis. This graph contains all of the inputs to the number of samples equation and pictorially represents the calculation.

The red vertical line is shown at the threshold (action limit) on the horizontal axis. The width of the gray shaded area is equal to Δ ; the upper horizontal dashed blue line is positioned at $1-\alpha$ on the vertical axis; the lower horizontal dashed blue line is positioned at β on the vertical axis. The vertical green line is positioned at one standard deviation below the threshold. The shape of the red curve corresponds to the estimates of variability. The calculated number of samples results in the curve that passes through the lower bound of Δ at β and the upper bound of Δ at $1-\alpha$. If any of the inputs change, the number of samples that result in the correct curve changes.

MARSSIM Sign Test

Calculated n=18, alpha=5%, beta=5%, std.dev.=0.8



Statistical Assumptions

The assumptions associated with the formulas for computing the number of samples are:

1. the computed sign test statistic is normally distributed,
2. the variance estimate, S^2 , is reasonable and representative of the population being sampled,
3. the population values are not spatially or temporally correlated, and
4. the sampling locations will be selected randomly.

The first three assumptions will be assessed in a post data collection analysis. The last assumption is valid because the sample locations were selected using a random process.

Sensitivity Analysis

The sensitivity of the calculation of number of samples was explored by varying the standard deviation, lower bound of gray region (% of action level), beta (%), probability of mistakenly concluding that $\mu >$ action level and alpha (%), probability of mistakenly concluding that $\mu <$ action level. The following table shows the results of this analysis.

Number of Samples							
AL=50		$\alpha=5$		$\alpha=10$		$\alpha=15$	
		s=1.6	s=0.8	s=1.6	s=0.8	s=1.6	s=0.8
LBGR=90	$\beta=5$	216	60	172	48	144	40
	$\beta=10$	172	48	132	36	108	30
	$\beta=15$	144	40	108	30	87	24
LBGR=80	$\beta=5$	60	22	48	17	40	15
	$\beta=10$	48	17	36	14	30	11
	$\beta=15$	40	15	30	11	24	9
LBGR=70	$\beta=5$	32	16	26	12	21	11
	$\beta=10$	26	12	20	10	16	9
	$\beta=15$	21	11	16	9	14	6

s = Standard Deviation
 LBGR = Lower Bound of Gray Region (% of Action Level)
 β = Beta (%), Probability of mistakenly concluding that $\mu >$ action level
 α = Alpha (%), Probability of mistakenly concluding that $\mu <$ action level
 AL = Action Level (Threshold)

Note: Values in table are not adjusted for EMC.

Data Analysis for PCB

The following data points were entered by the user for analysis.

PCB (mg/kg)										
Rank	1	2	3	4	5	6	7	8	9	10
0	0.05	0.051	0.052	0.052	0.053	0.053	0.054	0.054	0.059	0.063
10	0.082	0.215	0.239	0.24	0.28	0.34	0.4	0.596	0.698	0.79
20	1.33	12.5								

SUMMARY STATISTICS for PCB								
n				22				
Min				0.05				
Max				12.5				
Range				12.45				
Mean				0.82959				
Median				0.1485				
Variance				6.8998				
StdDev				2.6267				
Std Error				0.56002				
Skewness				4.5766				
Interquartile Range				0.396				
Percentiles								
1%	5%	10%	25%	50%	75%	90%	95%	99%
0.05	0.05015	0.0513	0.053	0.1485	0.449	1.168	10.82	12.5

Data Plots

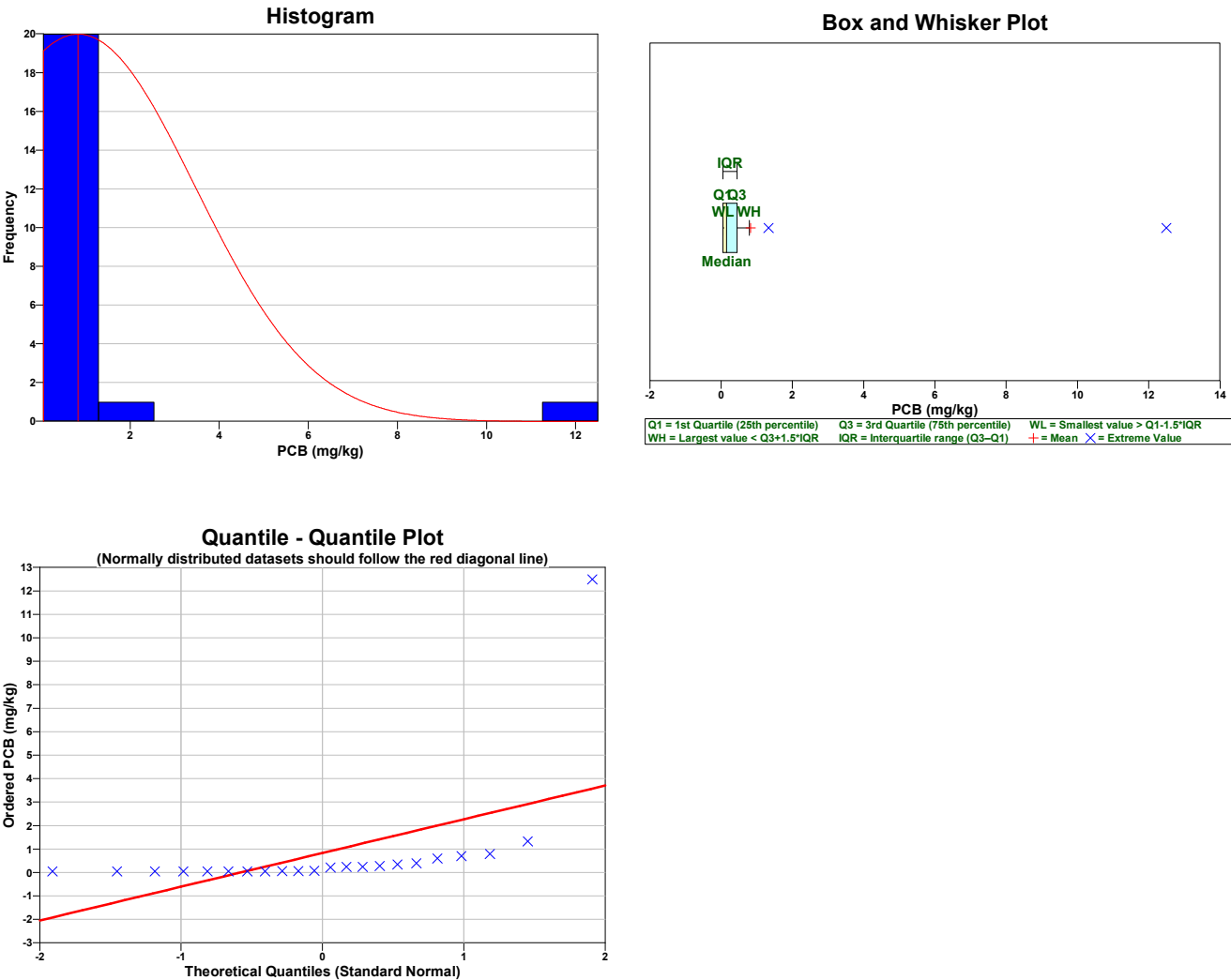
Three graphical displays of the data are shown below: the Histogram, the Box and Whiskers plot, and the Quantile-Quantile (Q-Q) plot.

The Histogram is a plot of the fraction of the n observed data that fall within specified data "bins." A histogram is generated by dividing the x axis (range of the observed data values) into "bins" and displaying the number of data in each bin as the height of a bar for the bin. The area of the bar is the fraction of the n data values that lie within the bin. The sum of the fractions for all bins equals one. A histogram is used to assess how the n data are distributed (spread) over their range of values. If the histogram is more or less symmetric and bell shaped, then the data may be normally distributed.

The Box and Whiskers plot is composed of a central box divided by a line, and with two lines extending out from the box, called the "whiskers". The line through the box is drawn at the median of the n data observed. The two ends of the box represent the 25th and 75th percentiles of the n data values, which are also called the lower and upper quartiles, respectively, of the data set. The sample mean (mean of the n data) is shown as a "+" sign. The upper whisker extends

to the largest data value that is less than the upper quartile plus 1.5 times the interquartile range (upper quartile minus the lower quartile). The lower whisker extends to the smallest data value that is greater than the lower quartile minus 1.5 times the interquartile range. Extreme data values (greater or smaller than the ends of the whiskers) are plotted individually. A Box and Whiskers plot is used to assess the symmetry of the distribution of the data set. If the distribution is symmetrical, the box is divided into two equal halves by the median, the whiskers will be the same length, and the number of extreme data points will be distributed equally on either end of the plot.

The Q-Q plot graphs the quantiles of a set of n data against the quantiles of a specific distribution. We show here only the Q-Q plot for an assumed normal distribution. The p^{th} quantile of a distribution of data is the data value, x_n , for which a fraction p of the distribution is less than x_n . If the data plotted on the normal distribution Q-Q plot closely follow a straight line, even at the ends of the line, then the data may be assumed to be normally distributed. If the data points deviate substantially from a linear line, then the data are not normally distributed.



For more information on these three plots consult Guidance for Data Quality Assessment, EPA QA/G-9, pgs 2.3-1 through 2.3-12. (<http://www.epa.gov/quality/qa-docs.html>).

Tests for PCB

Summary of Statistical Tests

The following table summarizes the data analysis results and is comparable to MARSSIM Table 8.2. This analysis applies to the discrete sample results (see MARSSIM 8.2.5).

All Measurements < DCGL _W	Average > DCGL _W	Sign Test Result	EMC Result	Conclusion
---	--------------------------------	------------------	------------	------------

Yes	No	N/A	All results <= the Investigation Level of 50 mg/kg	Survey Unit meets release criterion
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MARSSIM Sign Test

The Sign test was performed in accordance with the guidance given in section 8.3.2 of MARSSIM. Each measurement (X_i) was subtracted from the action level to obtain n differences: $d_i = AL - X_i$. Any differences of zero were discarded from consideration and the sample size was reduced accordingly. The test statistic S^+ was calculated by counting the positive differences. S^+ was then compared with the critical value k , which was obtained from Table I.3 in Appendix I of MARSSIM.

If $S^+ > k$, then the null hypothesis is rejected.

MARSSIM SIGN TEST		
Test Statistic S^+	95% Critical Value	Null Hypothesis
22	15	Reject

The test rejected the null hypothesis that the mean value at the site exceeds the threshold, so conclude the site is clean.

Data Analysis for Barium

The following data points were entered by the user for analysis.

Barium (mg/L)										
Rank	1	2	3	4	5	6	7	8	9	10
0	0.3	0.37	0.38	0.46	0.46	0.49	0.51	0.54	0.54	0.55
10	0.56	0.56	0.62	0.64	0.64	0.68	0.72	0.76	0.88	1
20	1	1.8								

SUMMARY STATISTICS for Barium								
n				22				
Min				0.3				
Max				1.8				
Range				1.5				
Mean				0.65727				
Median				0.56				
Variance				0.09904				
StdDev				0.31471				
Std Error				0.067096				
Skewness				2.4619				
Interquartile Range				0.2475				
Percentiles								
1%	5%	10%	25%	50%	75%	90%	95%	99%
0.3	0.3105	0.373	0.4825	0.56	0.73	1	1.68	1.8

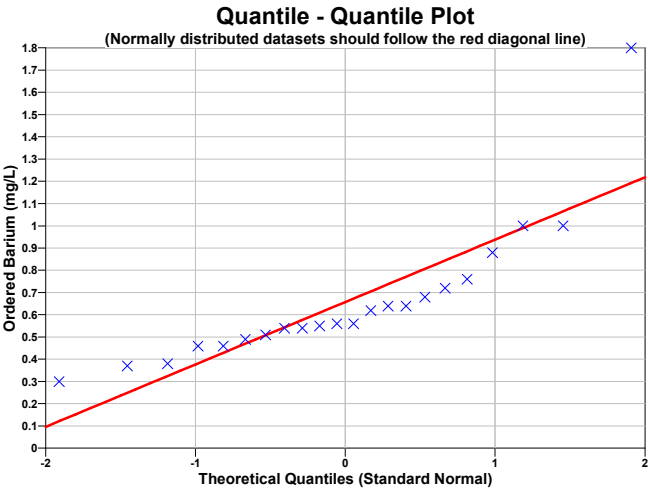
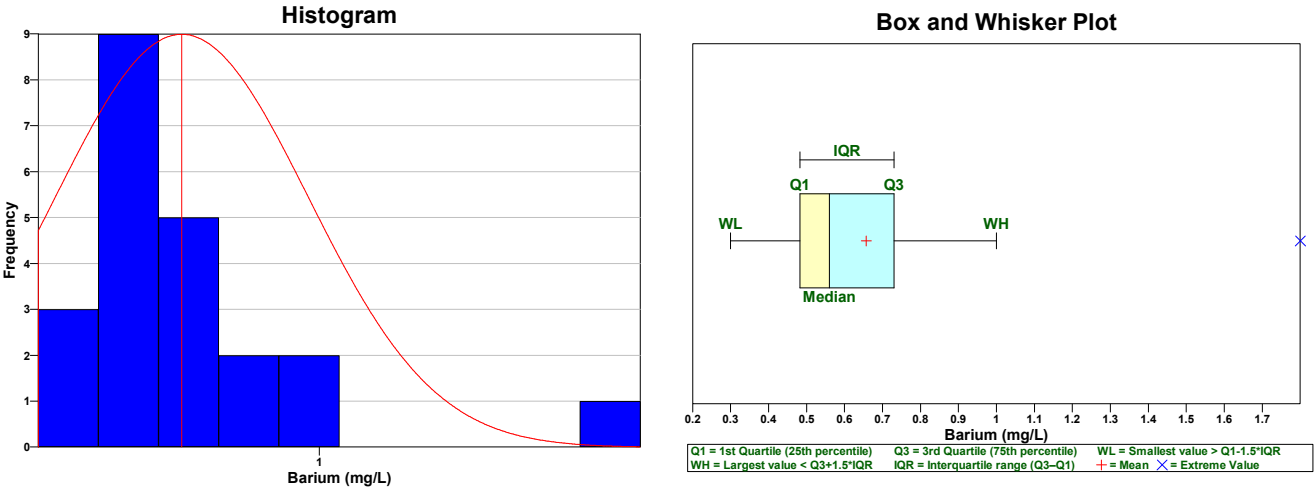
Data Plots

Three graphical displays of the data are shown below: the Histogram, the Box and Whiskers plot, and the Quantile-Quantile (Q-Q) plot.

The Histogram is a plot of the fraction of the n observed data that fall within specified data "bins." A histogram is generated by dividing the x axis (range of the observed data values) into "bins" and displaying the number of data in each bin as the height of a bar for the bin. The area of the bar is the fraction of the n data values that lie within the bin. The sum of the fractions for all bins equals one. A histogram is used to assess how the n data are distributed (spread) over their range of values. If the histogram is more or less symmetric and bell shaped, then the data may be normally distributed.

The Box and Whiskers plot is composed of a central box divided by a line, and with two lines extending out from the box, called the "whiskers". The line through the box is drawn at the median of the n data observed. The two ends of the box represent the 25th and 75th percentiles of the n data values, which are also called the lower and upper quartiles, respectively, of the data set. The sample mean (mean of the n data) is shown as a "+" sign. The upper whisker extends to the largest data value that is less than the upper quartile plus 1.5 times the interquartile range (upper quartile minus the lower quartile). The lower whisker extends to the smallest data value that is greater than the lower quartile minus 1.5 times the interquartile range. Extreme data values (greater or smaller than the ends of the whiskers) are plotted individually. A Box and Whiskers plot is used to assess the symmetry of the distribution of the data set. If the distribution is symmetrical, the box is divided into two equal halves by the median, the whiskers will be the same length, and the number of extreme data points will be distributed equally on either end of the plot.

The Q-Q plot graphs the quantiles of a set of n data against the quantiles of a specific distribution. We show here only the Q-Q plot for an assumed normal distribution. The pth quantile of a distribution of data is the data value, x_n, for which a fraction p of the distribution is less than x_n. If the data plotted on the normal distribution Q-Q plot closely follow a straight line, even at the ends of the line, then the data may be assumed to be normally distributed. If the data points deviate substantially from a linear line, then the data are not normally distributed.



For more information on these three plots consult Guidance for Data Quality Assessment, EPA QA/G-9, pgs 2.3-1 through

2.3-12. (<http://www.epa.gov/quality/qa-docs.html>).

Tests for Barium
Summary of Statistical Tests

The following table summarizes the data analysis results and is comparable to MARSSIM Table 8.2. This analysis applies to the discrete sample results (see MARSSIM 8.2.5).

All Measurements < DCGL _W	Average > DCGL _W	Sign Test Result	EMC Result	Conclusion
Yes	No	N/A	All results <= the Investigation Level of 100 mg/L	Survey Unit meets release criterion

MARSSIM Sign Test

The Sign test was performed in accordance with the guidance given in section 8.3.2 of MARSSIM. Each measurement (X_i) was subtracted from the action level to obtain n differences: $d_i = AL - X_i$. Any differences of zero were discarded from consideration and the sample size was reduced accordingly. The test statistic $S+$ was calculated by counting the positive differences. $S+$ was then compared with the critical value k , which was obtained from Table I.3 in Appendix I of MARSSIM.

If $S+ > k$, then the null hypothesis is rejected.

MARSSIM SIGN TEST		
Test Statistic $S+$	95% Critical Value	Null Hypothesis
22	15	Reject

The test rejected the null hypothesis that the mean value at the site exceeds the threshold, so conclude the site is clean.

Data Analysis for Cadmium

The following data points were entered by the user for analysis.

Cadmium (mg/L)										
Rank	1	2	3	4	5	6	7	8	9	10
0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
10	0.02	0.021	0.021	0.023	0.028	0.029	0.038	0.04	0.046	0.053
20	0.057	0.12								

SUMMARY STATISTICS for Cadmium	
n	22
Min	0.02
Max	0.12
Range	0.1
Mean	0.031636
Median	0.0205
Variance	0.00052548
StdDev	0.022923
Std Error	0.0048873
Skewness	3.0412
Interquartile Range	0.0185

Percentiles								
1%	5%	10%	25%	50%	75%	90%	95%	99%
0.02	0.02	0.02	0.02	0.0205	0.0385	0.0558	0.1106	0.12

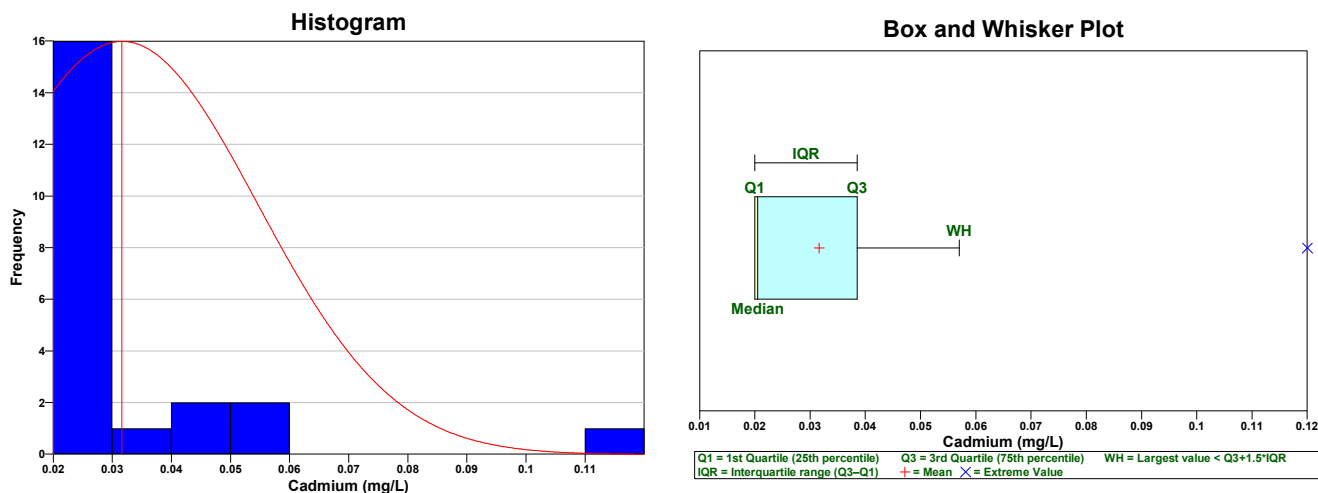
Data Plots

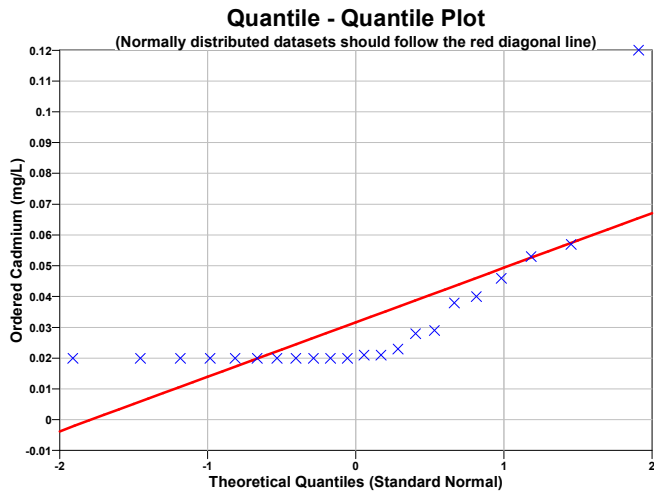
Three graphical displays of the data are shown below: the Histogram, the Box and Whiskers plot, and the Quantile-Quantile (Q-Q) plot.

The Histogram is a plot of the fraction of the n observed data that fall within specified data "bins." A histogram is generated by dividing the x axis (range of the observed data values) into "bins" and displaying the number of data in each bin as the height of a bar for the bin. The area of the bar is the fraction of the n data values that lie within the bin. The sum of the fractions for all bins equals one. A histogram is used to assess how the n data are distributed (spread) over their range of values. If the histogram is more or less symmetric and bell shaped, then the data may be normally distributed.

The Box and Whiskers plot is composed of a central box divided by a line, and with two lines extending out from the box, called the "whiskers". The line through the box is drawn at the median of the n data observed. The two ends of the box represent the 25th and 75th percentiles of the n data values, which are also called the lower and upper quartiles, respectively, of the data set. The sample mean (mean of the n data) is shown as a "+" sign. The upper whisker extends to the largest data value that is less than the upper quartile plus 1.5 times the interquartile range (upper quartile minus the lower quartile). The lower whisker extends to the smallest data value that is greater than the lower quartile minus 1.5 times the interquartile range. Extreme data values (greater or smaller than the ends of the whiskers) are plotted individually. A Box and Whiskers plot is used to assess the symmetry of the distribution of the data set. If the distribution is symmetrical, the box is divided into two equal halves by the median, the whiskers will be the same length, and the number of extreme data points will be distributed equally on either end of the plot.

The Q-Q plot graphs the quantiles of a set of n data against the quantiles of a specific distribution. We show here only the Q-Q plot for an assumed normal distribution. The p^{th} quantile of a distribution of data is the data value, x_n , for which a fraction p of the distribution is less than x_n . If the data plotted on the normal distribution Q-Q plot closely follow a straight line, even at the ends of the line, then the data may be assumed to be normally distributed. If the data points deviate substantially from a linear line, then the data are not normally distributed.





For more information on these three plots consult Guidance for Data Quality Assessment, EPA QA/G-9, pgs 2.3-1 through 2.3-12. (<http://www.epa.gov/quality/qa-docs.html>).

Tests for Cadmium

Summary of Statistical Tests

The following table summarizes the data analysis results and is comparable to MARSSIM Table 8.2. This analysis applies to the discrete sample results (see MARSSIM 8.2.5).

All Measurements < DCGL _W	Average > DCGL _W	Sign Test Result	EMC Result	Conclusion
Yes	No	N/A	All results <= the Investigation Level of 1 mg/L	Survey Unit meets release criterion

MARSSIM Sign Test

The Sign test was performed in accordance with the guidance given in section 8.3.2 of MARSSIM. Each measurement (X_i) was subtracted from the action level to obtain n differences: $d_i = AL - X_i$. Any differences of zero were discarded from consideration and the sample size was reduced accordingly. The test statistic S^+ was calculated by counting the positive differences. S^+ was then compared with the critical value k , which was obtained from Table I.3 in Appendix I of MARSSIM.

If $S^+ > k$, then the null hypothesis is rejected.

MARSSIM SIGN TEST		
Test Statistic S^+	95% Critical Value	Null Hypothesis
22	15	Reject

The test rejected the null hypothesis that the mean value at the site exceeds the threshold, so conclude the site is clean.

Data Analysis for Chromium

The following data points were entered by the user for analysis.

Chromium (mg/L)										
Rank	1	2	3	4	5	6	7	8	9	10
0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
10	0.024	0.039	0.05	0.059	0.076	0.076	0.1	0.12	0.13	0.22
20	0.26	0.58								

SUMMARY STATISTICS for Chromium

n				22				
Min				0.02				
Max				0.58				
Range				0.56				
Mean				0.087909				
Median				0.0315				
Variance				0.016539				
StdDev				0.1286				
Std Error				0.027418				
Skewness				3.0312				
Interquartile Range				0.085				
Percentiles								
1%	5%	10%	25%	50%	75%	90%	95%	99%
0.02	0.02	0.02	0.02	0.0315	0.105	0.248	0.532	0.58

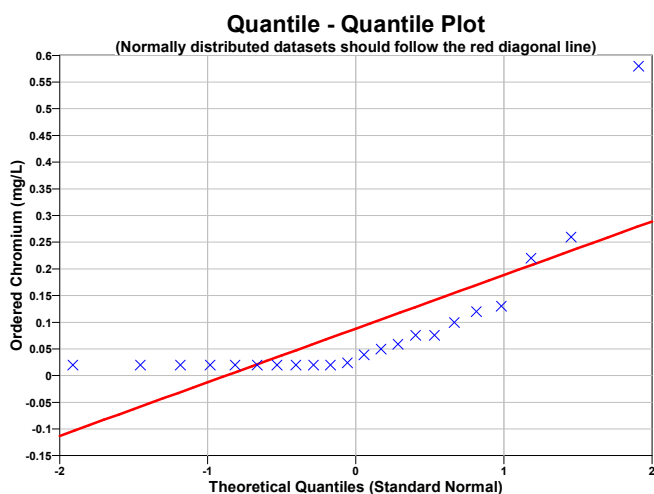
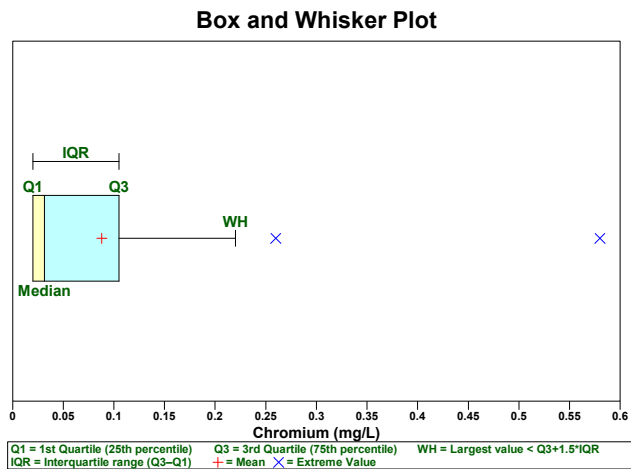
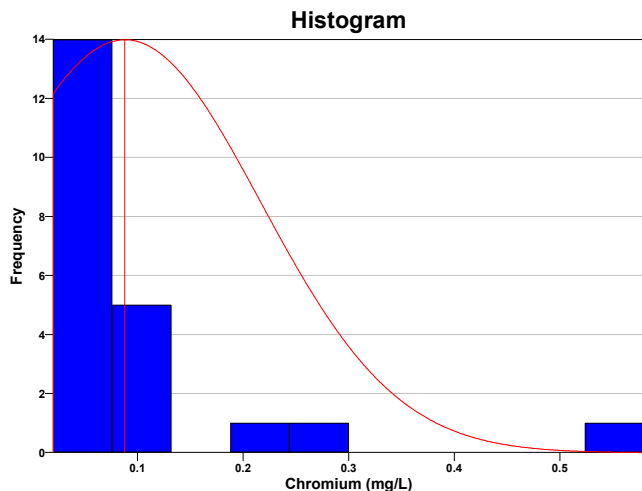
Data Plots

Three graphical displays of the data are shown below: the Histogram, the Box and Whiskers plot, and the Quantile-Quantile (Q-Q) plot.

The Histogram is a plot of the fraction of the n observed data that fall within specified data "bins." A histogram is generated by dividing the x axis (range of the observed data values) into "bins" and displaying the number of data in each bin as the height of a bar for the bin. The area of the bar is the fraction of the n data values that lie within the bin. The sum of the fractions for all bins equals one. A histogram is used to assess how the n data are distributed (spread) over their range of values. If the histogram is more or less symmetric and bell shaped, then the data may be normally distributed.

The Box and Whiskers plot is composed of a central box divided by a line, and with two lines extending out from the box, called the "whiskers". The line through the box is drawn at the median of the n data observed. The two ends of the box represent the 25th and 75th percentiles of the n data values, which are also called the lower and upper quartiles, respectively, of the data set. The sample mean (mean of the n data) is shown as a "+" sign. The upper whisker extends to the largest data value that is less than the upper quartile plus 1.5 times the interquartile range (upper quartile minus the lower quartile). The lower whisker extends to the smallest data value that is greater than the lower quartile minus 1.5 times the interquartile range. Extreme data values (greater or smaller than the ends of the whiskers) are plotted individually. A Box and Whiskers plot is used to assess the symmetry of the distribution of the data set. If the distribution is symmetrical, the box is divided into two equal halves by the median, the whiskers will be the same length, and the number of extreme data points will be distributed equally on either end of the plot.

The Q-Q plot graphs the quantiles of a set of n data against the quantiles of a specific distribution. We show here only the Q-Q plot for an assumed normal distribution. The p^{th} quantile of a distribution of data is the data value, x_n , for which a fraction p of the distribution is less than x_n . If the data plotted on the normal distribution Q-Q plot closely follow a straight line, even at the ends of the line, then the data may be assumed to be normally distributed. If the data points deviate substantially from a linear line, then the data are not normally distributed.



For more information on these three plots consult Guidance for Data Quality Assessment, EPA QA/G-9, pgs 2.3-1 through 2.3-12. (<http://www.epa.gov/quality/qa-docs.html>).

Tests for Chromium

Summary of Statistical Tests

The following table summarizes the data analysis results and is comparable to MARSSIM Table 8.2. This analysis applies to the discrete sample results (see MARSSIM 8.2.5).

All Measurements < $DCGL_W$	Average > $DCGL_W$	Sign Test Result	EMC Result	Conclusion
Yes	No	N/A	Investigation Level (IL) Not Specified	Survey Unit meets release criterion

MARSSIM Sign Test

The Sign test was performed in accordance with the guidance given in section 8.3.2 of MARSSIM. Each measurement (X_i) was subtracted from the action level to obtain n differences: $d_i = AL - X_i$. Any differences of zero were discarded from consideration and the sample size was reduced accordingly. The test statistic S^+ was calculated by counting the positive differences. S^+ was then compared with the critical value k , which was obtained from Table I.3 in Appendix I of MARSSIM.

If $S^+ > k$, then the null hypothesis is rejected.

MARSSIM SIGN TEST

Test Statistic S+	95% Critical Value	Null Hypothesis
22	15	Reject

The test rejected the null hypothesis that the mean value at the site exceeds the threshold, so conclude the site is clean.

Data Analysis for Lead

The following data points were entered by the user for analysis.

Lead (mg/L)										
Rank	1	2	3	4	5	6	7	8	9	10
0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
20	0.2	2.8								

SUMMARY STATISTICS for Lead								
n				22				
Min				0.2				
Max				2.8				
Range				2.6				
Mean				0.31818				
Median				0.2				
Variance				0.30727				
StdDev				0.55432				
Std Error				0.11818				
Skewness				4.6904				
Interquartile Range				0				
Percentiles								
1%	5%	10%	25%	50%	75%	90%	95%	99%
0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.41	2.8

Data Plots

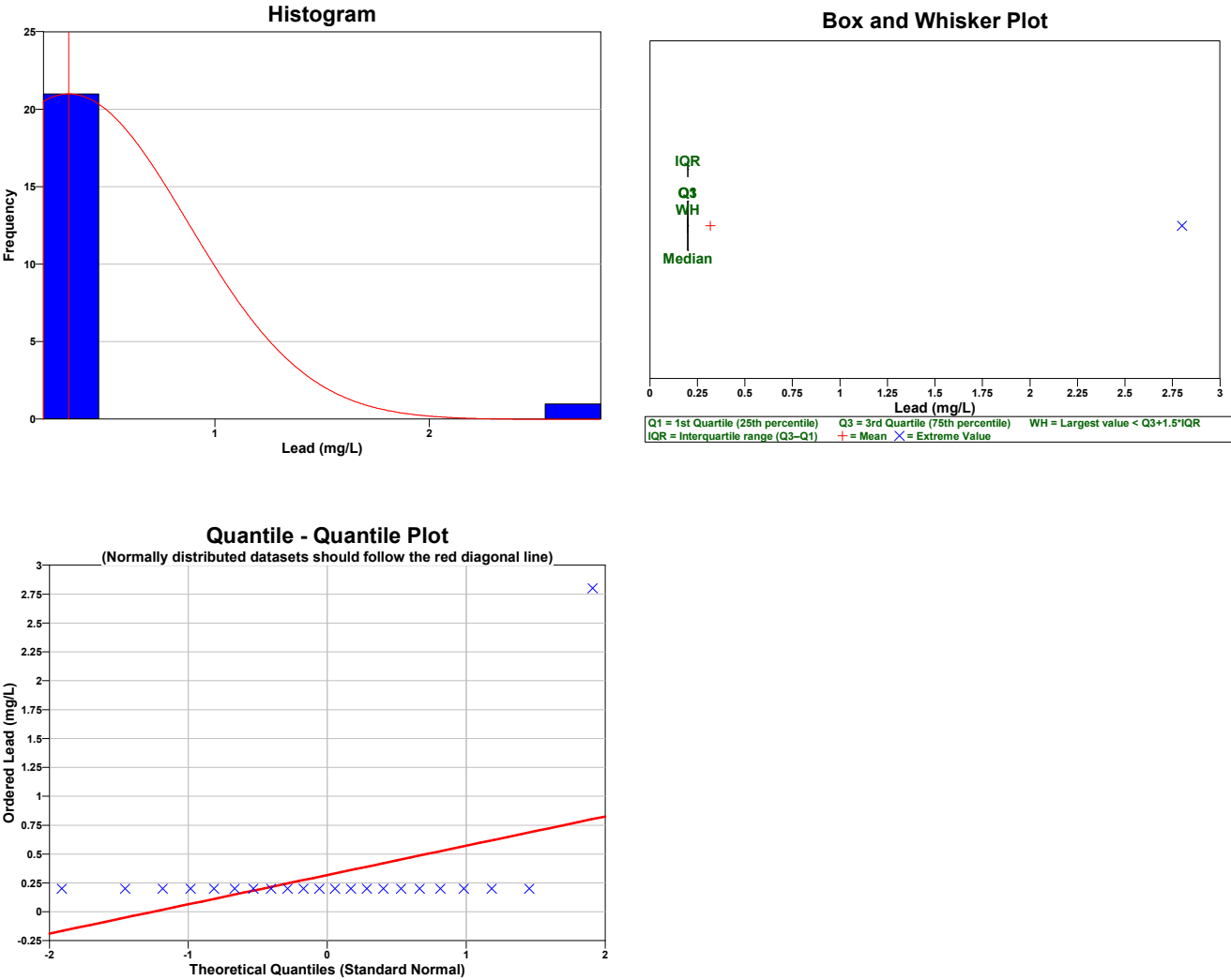
Three graphical displays of the data are shown below: the Histogram, the Box and Whiskers plot, and the Quantile-Quantile (Q-Q) plot.

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individually. A Box and Whiskers plot is used to assess the symmetry of the distribution of the data set. If the distribution is symmetrical, the box is divided into two equal halves by the median, the whiskers will be the same length, and the number of extreme data points will be distributed equally on either end of the plot.

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For more information on these three plots consult Guidance for Data Quality Assessment, EPA QA/G-9, pgs 2.3-1 through 2.3-12. (<http://www.epa.gov/quality/qa-docs.html>).

Tests for Lead

Summary of Statistical Tests

The following table summarizes the data analysis results and is comparable to MARSSIM Table 8.2. This analysis applies to the discrete sample results (see MARSSIM 8.2.5).

All Measurements < DCGL _w	Average > DCGL _w	Sign Test Result	EMC Result	Conclusion
Yes	No	N/A	All results <= the Investigation Level of 5 mg/L	Survey Unit meets release criterion

MARSSIM Sign Test

The Sign test was performed in accordance with the guidance given in section 8.3.2 of MARSSIM. Each measurement (X_i) was subtracted from the action level to obtain n differences: $d_i = AL - X_i$. Any differences of zero were discarded from consideration and the sample size was reduced accordingly. The test statistic S^+ was calculated by counting the positive differences. S^+ was then compared with the critical value k , which was obtained from Table I.3 in Appendix I of MARSSIM.

If $S^+ > k$, then the null hypothesis is rejected.

MARSSIM SIGN TEST		
Test Statistic S^+	95% Critical Value	Null Hypothesis
22	15	Reject

The test rejected the null hypothesis that the mean value at the site exceeds the threshold, so conclude the site is clean.

This report was automatically produced* by Visual Sample Plan (VSP) software version 7.13.

This design was last modified 7/7/2020 9:33:25 AM.

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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 22, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-002B

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 1, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID: AW-8; AW-16

Report date: June 22, 2020

Submitted to:

OnSite Environmental

14648 NE 95th Street

Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on two samples submitted by Onsite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The samples, identified as AW-8 and AW-16 were received in the laboratory on June 16, 2020. Upon arrival at the laboratory the samples were inspected and contents verified against information provided on the chain-of-custody form. The samples were stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test numbers	2006-024; 2006-025
Sample ID's	AW-8; AW-16
Test initiation date; time	6/18/2020; 0830h
Test termination date; time	6/22/2020; 0830h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The samples were tested using fish received on April 22, 2020.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	60 days post swim-up (hatch date 4/1/2020)
Mean weight	0.36 g
Mean length	36 mm
Ratio of longest to shortest	1.2
Loading	0.60 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on samples AW-8 and AW-16 are contained in Table 3. There was no mortality during the tests. Based on these results, the samples do not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
AW-8	10	30	0	None
	100	30	0	
AW-16	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated June 4, 2020. The LC₅₀ of 138 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 29.8 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2009. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised June 2009.

Appendix A
***Oncorhynchus mykiss* Dangerous Waste Toxicity Test**
Raw Bench Sheets

Dangerous Waste Toxicity Test

Client: **ON SITE ENVIRONMENTAL**

Sample ID: **AW-8; AW-16**

Test #: **2006-034; 2006-035**

Log In #: **T20-134; T20-135**

Start Date & Time: **6/18/2020 0830**

End Date & Time: **6/22/2020 0830**

Test Organism: ***Oncorhynchus mykiss***

Test Protocol: **Washington State Department of Ecology Publ. 80-12**

Rep	Conc.	Cont #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH (units)					Conductivity (umhos/cm)					Temperature (°C)					Percent Survival
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	CON	15	10	10	10	10	10	8.9	8.5	8.3	7.9	7.5	7.85	7.71	7.58	7.31	7.28	3.3										
2		8	10	10	10	10	10	9.1	8.6	8.3	8.1	7.7	7.94	7.68	7.57	7.34	7.23	3.5										
3		32	10	10	10	10	10	9.0	8.3	8.1	8.0	7.5	7.91	7.65	7.52	7.38	7.27	3.3										
1	10PPM	17	10	10	10	10	10	9.0	8.5	8.4	8.3	8.0	7.92	7.70	7.57	7.41	7.26	3.3										
2	AW-8	14	10	10	10	10	10	9.0	8.7	8.5	8.1	7.7	7.93	7.68	7.55	7.35	7.21	3.2										
3	T20-134	7	10	10	10	10	10	9.1	8.6	8.4	8.0	7.8	7.94	7.64	7.52	7.32	7.24	3.3										
1	100PPM	23	10	10	10	10	10	9.2	8.6	8.3	7.9	7.4	7.94	7.67	7.52	7.31	7.26	3.5										
2	AW-8	16	10	10	10	10	10	9.8	8.4	8.3	8.1	7.9	7.95	7.69	7.54	7.35	7.26	3.4										
3	T20-134	18	10	10	10	10	10	8.7	8.3	8.1	7.9	7.4	7.91	7.68	7.53	7.34	7.27	3.4										
1	10PPM	5	10	10	10	10	10	9.1	8.6	8.5	8.3	8.0	7.93	7.64	7.51	7.38	7.21	3.4										
2	AW-16	30	10	10	10	10	10	9.1	8.5	8.3	8.1	8.0	7.92	7.65	7.50	7.35	7.28	3.3										
3	T20-135	27	10	10	10	10	10	9.2	8.7	8.4	8.2	8.1	7.92	7.64	7.53	7.38	7.24	3.4										
1	100PPM	6	10	10	10	10	10	9.0	8.4	8.1	7.8	7.6	7.93	7.69	7.52	7.34	7.28	3.3										
2	AW-16	19	10	10	10	10	10	9.0	8.5	8.3	8.0	7.8	7.94	7.68	7.53	7.38	7.23	3.2										
3	T20-135	9	10	10	10	10	10	8.9	8.3	8.2	8.0	7.9	7.94	7.68	7.54	7.38	7.21	3.3										
1																												
2																												
3																												
1																												
2																												
3																												
Technician Initials			25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Sample	Alk. (init.)	Hard (init.)	Alk. (fin.)	Hard. (fin.)	Chlorine (mg/L Cl2)
	(mg/L as CaCO3)				
Control	64	84	64	84	4003
AW-8	64	84	64	84	Weights (g):
AW-16	60	84	64	80	Lengths(mm):
					Length max:

Test Volume: **6.0L**
 Date of Hatch: **4/1/20**
 Date of Swim up: **4/13/20**
 Weights (g): **37 34 33 35 40 37 36 35 34 34**
 Lengths (mm): **35 35 34 34 34 37 35 35 34**
 Length max/min: **39/32 1.2**
 Loading: **0.60g/L**
 $\mu = 36$
 $\mu = 36$

Dilution Water Source: **MHW 048** QA Check **87**

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

Organism: Oncorhynchus mykiss (Rainbow Tro

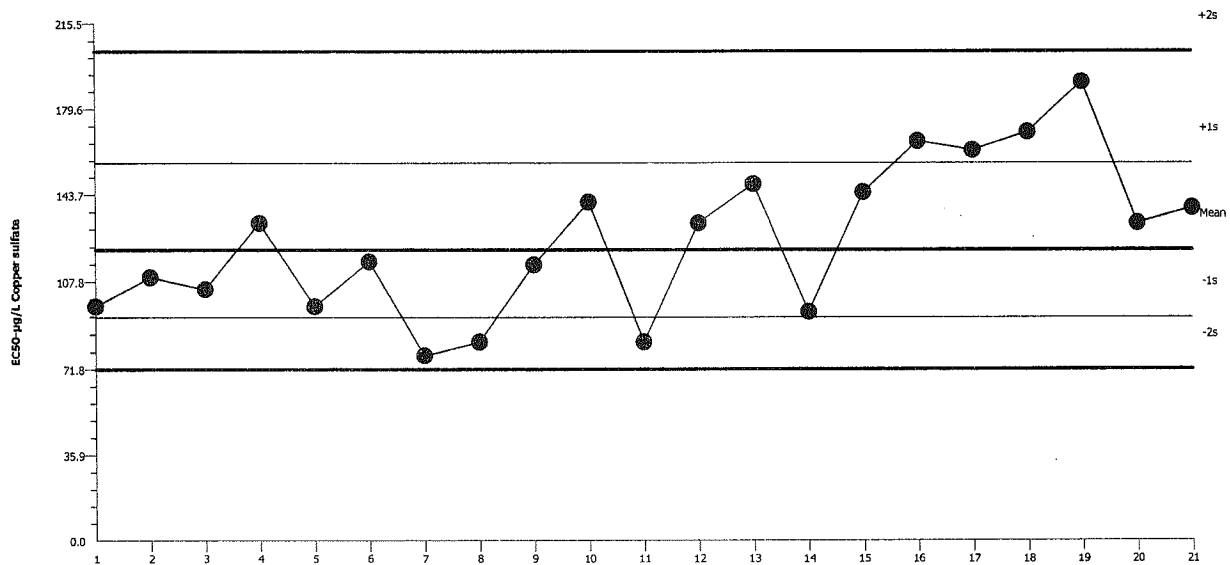
Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF

Fish 96-h Acute Survival Test



Mean: 121

Count: 20

-1s Warning Limit: 93.24

-2s Action Limit: 71.84

Sigma: NA

CV: 29.80%

+1s Warning Limit: 157.1

+2s Action Limit: 203.9

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2018	Aug	30	97.72	-23.31	-0.8203			01-6631-0399	00-2872-0274
2		Oct	5	109.7	-11.34	-0.3773			09-8718-1650	14-5303-2875
3		Nov	6	104.7	-16.3	-0.5545			20-5282-8357	01-3690-0719
4		Dec	5	132	10.93	0.3314			01-4499-1094	07-5652-1457
5	2019	Jan	7	97.72	-23.31	-0.8203			03-9395-5944	09-6087-0434
6		Feb	9	116.1	-4.882	-0.1579			13-6349-4914	05-5573-8325
7		Mar	12	77.56	-43.47	-1.706	(-)		03-9582-1391	08-0363-8342
8		Apr	19	83.12	-37.9	-1.44	(-)		16-0727-4914	09-8538-6220
9		May	21	114.9	-6.156	-0.2002			13-0213-5670	12-8044-7071
10		Jun	21	140.6	19.61	0.5759			18-7198-9789	02-0902-1290
11		Jul	23	83.12	-37.9	-1.44	(-)		09-5504-5129	09-5466-8341
12		Aug	23	132	10.93	0.3314			06-2129-4986	03-1480-8200
13		Sep	20	148.1	27.08	0.7744			14-9775-6582	02-8526-9159
14		Oct	22	95.48	-25.54	-0.9089			08-2604-9852	04-5996-4554
15		Nov	25	144.7	23.7	0.6858			19-0900-7567	17-7816-6246
16		Dec	26	166.2	45.22	1.217	(+)		18-0718-4325	01-1522-2292
17	2020	Jan	27	162.5	41.43	1.129	(+)		15-7428-0290	09-7189-2054
18		Feb	28	170.1	49.11	1.306	(+)		09-4267-7927	12-7910-1452
19		Apr	1	191	69.94	1.749	(+)		13-6543-5000	21-3363-8866
20		May	1	132	10.93	0.3314			05-3085-5611	09-0915-7454
21		Jun	4	138.2	17.17	0.5086			02-5099-4531	13-4027-8146

CETIS Summary Report

 Report Date: 08 Jun-20 12:43 (p 1 of 1)
 Test Code: RA060420OM | 02-5099-4531

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID: 00-5413-6128	Test Type: Survival (96h)	Analyst: Eric Tollefson
Start Date: 04 Jun-20 11:15	Protocol: Not Applicable	Diluent: Mod-Hard Synthetic Water
Ending Date: 08 Jun-20 12:00	Species: Oncorhynchus mykiss	Brine:
Duration: 4d 1h	Source: Trout Lodge Fish Farm	Age: 46d

Sample ID: 19-4490-5545	Code: RA060420OM	Client: Internal Lab
Sample Date: 04 Jun-20	Material: Copper sulfate	Project:
Receive Date: 04 Jun-20	Source: Reference Toxicant	
Sample Age: 11h	Station: In House	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-4329-7482	96h Survival Rate	50	100	70.71	15.5%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
13-4027-8146	96h Survival Rate	LC50	138.2	119.3	160.1		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.7667	0.7451	0.7882	0.7	0.8	0.03333	0.05774	7.53%	23.33%
200		3	0.2	0.1253	0.2747	0	0.4	0.1155	0.2	100.0%	80.0%
400		3	0	0	0	0	0	0	0	100.0%	100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.7	0.8	0.8
200		0.4	0.2	0
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		7/10	8/10	8/10
200		4/10	2/10	0/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form

[illegible]



Chain of Custody

Company:	DH Environmental
Project Number:	
Project Name:	Star Forge
Project Manager:	Dave Hill
Sampled by:	N. Moxley / B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

[illegible]

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Nm	NWTF	NWTF	NWTF	NWTF	Volatiles	Halogens	EDB	Semivolatile (with PAHs)	PCHS	Organics	Oganic	Chlorine	Total PCBs	Total PCBs	TCLP PCBs	HEM	F.I.	% Mo
1	AW-2	6/1/20	0655	Solds	5					X				X				X	X				X
2	AW-8		0705																			(X)	
3	AW-4		0715																				
4	AW-22		0725																				
5	AW-12		0735										X										
6	AW-19		0750																				
7	AW-15		0755																				
8	AW-7		0805																				
9	AW-21		0815																				
10	AW-11	↓	0820	↓	↓					↓				↓				↓	↓				↓

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	OH Env.	6-1-20	11:10	(X) Added 6/15/2020. D3 (1 week RUSH
Received	OGE	6/1/20	11:10	
Relinquished				
Received				
Relinquished				
Received				Data Package: Standard ☒ Level III ☐ Level IV ☐
Reviewed/Date	Reviewed/Date	Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		

Page 3 of 3

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		OH Env.	6-1-20	11:10	
Received		OH Env.	6/1/20	11:10	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard ☐ Level III ☐ Level IV ☐
					Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Company: DH Environmental

Project Number:

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Moxley / B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: 06-002

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (□ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals + Cu, Ni, Zn	Total MTCA Metals	TCLP Metals	PCRA 8	HEM (oil and grease) 1664A	% Moisture	
11	AW-9	6/1/20	0830	Slids	5					X					X				X	X					X
12	AW-14		0840																						
13	AW-5		0850																						
14	AW-3		0900																						
15	AW-1		0910																						
16	AW-10		0920																						
17	AW-13		0930																						
18	AW-18		0940																						
19	AW-20		0950																						
20	AW-6		1005											X											

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		DH Env.	6-1-20	11:10	
Received		OE	6/1/20	11:10	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard ☐ Level III ☐ Level IV ☐
					Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 4, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2006-002

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on June 1, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
Samples Submitted: June 1, 2020
Laboratory Reference: 2006-002
Project: Star Forge

Case Narrative

Samples were collected on June 1, 2020 and received by the laboratory on June 1, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

Surrogate Standard Dibromofluoromethane is outside control limits for sample AW-14 due to sample matrix effects. The sample was re-analyzed with similar results.

Some MTCA Method A cleanup levels are non-achievable for sample AW-6 due to the foaming nature of the sample matrix.

Some MTCA Method A cleanup levels are non-achievable for sample AW-16 due to the low weight of the sample matrix.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Nickel is outside control limits due to sample inhomogeneity.

The duplicate RPD for Barium and Copper is outside control limits due to sample inhomogeneity.

Due to the high concentration of Barium, Chromium, Copper, Lead, Nickel and Zinc in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 102% for Barium, 91% for Chromium, 107% for Copper, 94% for Lead, 102% for Nickel and 97% for Zinc.

The Matrix Spike/Matrix Spike Duplicate RPD for Barium is outside control limits due to matrix inhomogeneity.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AW-2				
Laboratory ID:		06-002-01				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0056	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0020	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Acetone	0.019	0.0083	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.015	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-2					
Laboratory ID:	06-002-01					
1,1,2-Trichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	0.0028	0.00083	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0041	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	74-131				
Toluene-d8	98	78-128				
4-Bromofluorobenzene	103	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-8					
Laboratory ID:	06-002-02					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0079	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0028	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.021	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-8					
Laboratory ID:	06-002-02					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0023	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	92	74-131				
Toluene-d8	98	78-128				
4-Bromofluorobenzene	109	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-4					
Laboratory ID:	06-002-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0059	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0021	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.0087	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.016	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	



Date of Report: June 4, 2020
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-4					
Laboratory ID:	06-002-03					
1,1,2-Trichloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0043	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.00087	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	74-131				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	104	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-22					
Laboratory ID:	06-002-04					
Dichlorodifluoromethane	ND	0.0032	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.016	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Acetone	0.055	0.024	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.044	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.012	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.012	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Chloroform	0.0026	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Benzene	0.0024	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	0.0055	0.0024	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.012	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-22					
Laboratory ID:	06-002-04					
1,1,2-Trichloroethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.012	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.012	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	104	71-130				



Date of Report: June 4, 2020
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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-12					
Laboratory ID:	06-002-05					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0065	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0023	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.0095	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.017	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	



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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-12					
Laboratory ID:	06-002-05					
1,1,2-Trichloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0019	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0048	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	88	74-131				
Toluene-d8	97	78-128				
4-Bromofluorobenzene	108	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-19					
Laboratory ID:	06-002-06					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0080	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0028	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.012	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.021	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-19					
Laboratory ID:	06-002-06					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0023	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0058	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	87	74-131				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	102	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-15					
Laboratory ID:	06-002-07					
Dichlorodifluoromethane	ND	0.0022	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.011	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.017	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.030	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-15					
Laboratory ID:	06-002-07					
1,1,2-Trichloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0033	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	87	74-131				
Toluene-d8	99	78-128				
4-Bromofluorobenzene	110	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-7					
Laboratory ID:	06-002-08					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0053	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0019	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.0077	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.014	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-7					
Laboratory ID:	06-002-08					
1,1,2-Trichloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0015	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0039	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.00077	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	87	74-131				
Toluene-d8	97	78-128				
4-Bromofluorobenzene	109	71-130				



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 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-21					
Laboratory ID:	06-002-09					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0054	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0019	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.0080	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.014	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-21					
Laboratory ID:	06-002-09					
1,1,2-Trichloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0016	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0040	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.00080	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	74-131				
Toluene-d8	96	78-128				
4-Bromofluorobenzene	101	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-11					
Laboratory ID:	06-002-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-2-20	6-2-20	
Chloromethane	ND	0.0046	EPA 8260D	6-2-20	6-2-20	
Vinyl Chloride	ND	0.00081	EPA 8260D	6-2-20	6-2-20	
Bromomethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Chloroethane	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Trichlorofluoromethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Acetone	ND	0.0062	EPA 8260D	6-2-20	6-2-20	
Iodomethane	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Carbon Disulfide	ND	0.00081	EPA 8260D	6-2-20	6-2-20	
Methylene Chloride	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Vinyl Acetate	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
2,2-Dichloropropane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
2-Butanone	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Bromochloromethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Chloroform	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Carbon Tetrachloride	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloropropene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Benzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Trichloroethene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloropropane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Dibromomethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Bromodichloromethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Toluene	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-11					
Laboratory ID:	06-002-10					
1,1,2-Trichloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Tetrachloroethene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,3-Dichloropropane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
2-Hexanone	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Dibromochloromethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromoethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Chlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Ethylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
m,p-Xylene	ND	0.0012	EPA 8260D	6-2-20	6-2-20	
o-Xylene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Styrene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Bromoform	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Isopropylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Bromobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.0031	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.00062	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	97	74-131				
Toluene-d8	96	78-128				
4-Bromofluorobenzene	93	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AW-9				
Laboratory ID:		06-002-11				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0056	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0020	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	0.0095	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Acetone	0.010	0.0083	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.015	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	



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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-9					
Laboratory ID:	06-002-11					
1,1,2-Trichloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0017	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0042	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.00083	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.043	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.22	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.22	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.22	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.043	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	79	74-131				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	100	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-14					
Laboratory ID:	06-002-12					
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0084	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0030	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Acetone	0.044	0.012	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.022	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Butanone	0.0079	0.0062	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-14					
Laboratory ID:	06-002-12					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0025	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0062	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	6-1-20	6-1-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	18	74-131				Q
Toluene-d8	96	78-128				
4-Bromofluorobenzene	109	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AW-5				
Laboratory ID:		06-002-13				
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Acetone	0.038	0.0074	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
2-Butanone	0.0064	0.0037	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-5					
Laboratory ID:	06-002-13					
1,1,2-Trichloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0015	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	6-1-20	6-2-20	
n-Propylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
2-Chlorotoluene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
4-Chlorotoluene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
tert-Butylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
sec-Butylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
p-Isopropyltoluene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
n-Butylbenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Hexachlorobutadiene	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
Naphthalene	ND	0.0037	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260D	6-1-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	101	74-131				
Toluene-d8	98	78-128				
4-Bromofluorobenzene	96	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AW-3				
Laboratory ID:		06-002-14				
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Acetone	0.045	0.010	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	0.0034	0.0010	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0066	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
2-Butanone	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	



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 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-3					
Laboratory ID:	06-002-14					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0021	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260D	6-1-20	6-2-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Hexachlorobutadiene	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
Naphthalene	ND	0.0051	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	93	71-130				



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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		AW-1				
Laboratory ID:		06-002-15				
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Acetone	0.053	0.011	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0073	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
2-Butanone	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-1					
Laboratory ID:	06-002-15					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0023	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0057	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.077	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.38	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.38	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.38	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.077	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	111	74-131				
Toluene-d8	82	78-128				
4-Bromofluorobenzene	75	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-10					
Laboratory ID:	06-002-16					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Acetone	ND	0.0094	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0060	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Butanone	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-10					
Laboratory ID:	06-002-16					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0019	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.042	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.21	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.21	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.042	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	113	74-131				
Toluene-d8	86	78-128				
4-Bromofluorobenzene	86	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-13					
Laboratory ID:	06-002-17					
Dichlorodifluoromethane	ND	0.00093	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Acetone	0.024	0.0066	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0042	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
2-Butanone	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	



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 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-13					
Laboratory ID:	06-002-17					
1,1,2-Trichloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0013	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260D	6-1-20	6-2-20	
n-Propylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
2-Chlorotoluene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
4-Chlorotoluene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
tert-Butylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
sec-Butylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,3-Dichlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
p-Isopropyltoluene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,4-Dichlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2-Dichlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
n-Butylbenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Hexachlorobutadiene	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
Naphthalene	ND	0.0033	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.00066	EPA 8260D	6-1-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	74-131				
Toluene-d8	91	78-128				
4-Bromofluorobenzene	87	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-18					
Laboratory ID:	06-002-18					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Acetone	0.040	0.0094	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0060	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Butanone	0.0070	0.0047	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-18					
Laboratory ID:	06-002-18					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0019	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	6-1-20	6-2-20	
n-Propylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
2-Chlorotoluene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
4-Chlorotoluene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
tert-Butylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
sec-Butylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
p-Isopropyltoluene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
n-Butylbenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
Naphthalene	ND	0.0047	EPA 8260D	6-1-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260D	6-1-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	74-131				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	94	71-130				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-20					
Laboratory ID:	06-002-19					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	6-1-20	6-2-20	
Chloromethane	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
Vinyl Chloride	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Bromomethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Chloroethane	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
Trichlorofluoromethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Acetone	0.084	0.0078	EPA 8260D	6-1-20	6-2-20	
Iodomethane	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
Carbon Disulfide	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-1-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloroethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Vinyl Acetate	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
2,2-Dichloropropane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
2-Butanone	0.014	0.0039	EPA 8260D	6-1-20	6-2-20	
Bromochloromethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Chloroform	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Carbon Tetrachloride	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,1-Dichloropropene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Benzene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloroethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Trichloroethene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,2-Dichloropropane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Dibromomethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Bromodichloromethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Methyl Isobutyl Ketone	0.0062	0.0039	EPA 8260D	6-1-20	6-2-20	
Toluene	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-20					
Laboratory ID:	06-002-19					
1,1,2-Trichloroethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Tetrachloroethene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,3-Dichloropropane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
2-Hexanone	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
Dibromochloromethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,2-Dibromoethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Chlorobenzene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Ethylbenzene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
m,p-Xylene	ND	0.0016	EPA 8260D	6-1-20	6-2-20	
o-Xylene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Styrene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Bromoform	ND	0.0039	EPA 8260D	6-1-20	6-2-20	
Isopropylbenzene	ND	0.00078	EPA 8260D	6-1-20	6-2-20	
Bromobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.041	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.21	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.21	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.041	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	117	74-131				
Toluene-d8	84	78-128				
4-Bromofluorobenzene	81	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-6					
Laboratory ID:	06-002-20					
Dichlorodifluoromethane	ND	0.064	EPA 8260D	6-2-20	6-2-20	
Chloromethane	ND	0.28	EPA 8260D	6-2-20	6-2-20	
Vinyl Chloride	ND	0.049	EPA 8260D	6-2-20	6-2-20	
Bromomethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Chloroethane	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Trichlorofluoromethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Acetone	ND	0.38	EPA 8260D	6-2-20	6-2-20	
Iodomethane	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Carbon Disulfide	ND	0.049	EPA 8260D	6-2-20	6-2-20	
Methylene Chloride	ND	0.19	EPA 8260D	6-2-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Methyl t-Butyl Ether	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Vinyl Acetate	ND	0.19	EPA 8260D	6-2-20	6-2-20	
2,2-Dichloropropane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
2-Butanone	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Bromochloromethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Chloroform	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1,1-Trichloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Carbon Tetrachloride	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloropropene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Benzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Trichloroethene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloropropane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Dibromomethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Bromodichloromethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.19	EPA 8260D	6-2-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Toluene	ND	0.19	EPA 8260D	6-2-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.038	EPA 8260D	6-2-20	6-2-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-6					
Laboratory ID:	06-002-20					
1,1,2-Trichloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Tetrachloroethene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,3-Dichloropropane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
2-Hexanone	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Dibromochloromethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromoethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Chlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Ethylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
m,p-Xylene	ND	0.076	EPA 8260D	6-2-20	6-2-20	
o-Xylene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Styrene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Bromoform	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Isopropylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Bromobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.038	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.19	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.19	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.19	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.038	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	74-131				
Toluene-d8	100	78-128				
4-Bromofluorobenzene	97	71-130				



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
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Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-16					
Laboratory ID:	06-002-21					
Dichlorodifluoromethane	ND	0.013	EPA 8260D	6-2-20	6-2-20	
Chloromethane	ND	0.058	EPA 8260D	6-2-20	6-2-20	
Vinyl Chloride	ND	0.010	EPA 8260D	6-2-20	6-2-20	
Bromomethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Chloroethane	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Trichlorofluoromethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Acetone	ND	0.079	EPA 8260D	6-2-20	6-2-20	
Iodomethane	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Carbon Disulfide	0.011	0.010	EPA 8260D	6-2-20	6-2-20	Y
Methylene Chloride	ND	0.039	EPA 8260D	6-2-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Methyl t-Butyl Ether	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Vinyl Acetate	ND	0.039	EPA 8260D	6-2-20	6-2-20	
2,2-Dichloropropane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
2-Butanone	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Bromochloromethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Chloroform	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1,1-Trichloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Carbon Tetrachloride	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloropropene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Benzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Trichloroethene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloropropane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Dibromomethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Bromodichloromethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.039	EPA 8260D	6-2-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Toluene	ND	0.039	EPA 8260D	6-2-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-16					
Laboratory ID:	06-002-21					
1,1,2-Trichloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Tetrachloroethene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,3-Dichloropropane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
2-Hexanone	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Dibromochloromethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromoethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Chlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Ethylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
m,p-Xylene	ND	0.016	EPA 8260D	6-2-20	6-2-20	
o-Xylene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Styrene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Bromoform	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Isopropylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Bromobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.039	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.039	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.039	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.0079	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	90	74-131				
Toluene-d8	97	78-128				
4-Bromofluorobenzene	91	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-17					
Laboratory ID:	06-002-22					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	6-2-20	6-2-20	
Chloromethane	ND	0.0064	EPA 8260D	6-2-20	6-2-20	
Vinyl Chloride	ND	0.0011	EPA 8260D	6-2-20	6-2-20	
Bromomethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Chloroethane	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
Trichlorofluoromethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Acetone	0.10	0.0087	EPA 8260D	6-2-20	6-2-20	
Iodomethane	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
Carbon Disulfide	0.0012	0.0011	EPA 8260D	6-2-20	6-2-20	Y
Methylene Chloride	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Methyl t-Butyl Ether	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Vinyl Acetate	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
2,2-Dichloropropane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
2-Butanone	0.017	0.0044	EPA 8260D	6-2-20	6-2-20	
Bromochloromethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Chloroform	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Carbon Tetrachloride	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloropropene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Benzene	0.00091	0.00087	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloroethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Trichloroethene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloropropane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Dibromomethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Bromodichloromethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Methyl Isobutyl Ketone	0.0050	0.0044	EPA 8260D	6-2-20	6-2-20	
Toluene	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-17					
Laboratory ID:	06-002-22					
1,1,2-Trichloroethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Tetrachloroethene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,3-Dichloropropane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
2-Hexanone	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
Dibromochloromethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromoethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Chlorobenzene	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260D	6-2-20	6-2-20	
Ethylbenzene	0.0057	0.00087	EPA 8260D	6-2-20	6-2-20	
m,p-Xylene	0.15	0.091	EPA 8260D	6-2-20	6-2-20	
o-Xylene	0.051	0.045	EPA 8260D	6-2-20	6-2-20	
Styrene	0.0075	0.00087	EPA 8260D	6-2-20	6-2-20	
Bromoform	ND	0.0044	EPA 8260D	6-2-20	6-2-20	
Isopropylbenzene	0.0010	0.00087	EPA 8260D	6-2-20	6-2-20	
Bromobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.045	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.23	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.23	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.23	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.045	EPA 8260D	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	74-131				
Toluene-d8	86	78-128				
4-Bromofluorobenzene	72	71-130				



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.010	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S2					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	6-1-20	6-1-20	
Chloromethane	ND	0.0068	EPA 8260D	6-1-20	6-1-20	
Vinyl Chloride	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromomethane	ND	0.0024	EPA 8260D	6-1-20	6-1-20	
Chloroethane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Acetone	ND	0.010	EPA 8260D	6-1-20	6-1-20	
Iodomethane	ND	0.018	EPA 8260D	6-1-20	6-1-20	
Carbon Disulfide	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Butanone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chloroform	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Benzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Toluene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-1-20	6-1-20	
o-Xylene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Styrene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromoform	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
Naphthalene	ND	0.0050	EPA 8260D	6-1-20	6-1-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-1-20	6-1-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602S2					
Dichlorodifluoromethane	ND	0.0017	EPA 8260D	6-2-20	6-2-20	
Chloromethane	ND	0.0073	EPA 8260D	6-2-20	6-2-20	
Vinyl Chloride	ND	0.0013	EPA 8260D	6-2-20	6-2-20	
Bromomethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Chloroethane	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Acetone	ND	0.010	EPA 8260D	6-2-20	6-2-20	
Iodomethane	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Carbon Disulfide	ND	0.0013	EPA 8260D	6-2-20	6-2-20	
Methylene Chloride	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Vinyl Acetate	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
2-Butanone	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Bromochloromethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Chloroform	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Benzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Trichloroethene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Dibromomethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Bromodichloromethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Toluene	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	



Date of Report: June 4, 2020
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
2-Hexanone	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Dibromochloromethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Chlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Ethylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
m,p-Xylene	ND	0.0020	EPA 8260D	6-2-20	6-2-20	
o-Xylene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Styrene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Bromoform	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Isopropylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Bromobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
n-Propylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
2-Chlorotoluene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
4-Chlorotoluene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
tert-Butylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
sec-Butylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
n-Butylbenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
Naphthalene	ND	0.0050	EPA 8260D	6-2-20	6-2-20	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	6-2-20	6-2-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>89</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



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Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0601S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0537	0.0578	0.0500	0.0500	107	116	55-126	7	17	
Benzene	0.0483	0.0520	0.0500	0.0500	97	104	65-121	7	16	
Trichloroethene	0.0521	0.0573	0.0500	0.0500	104	115	74-126	10	16	
Toluene	0.0512	0.0545	0.0500	0.0500	102	109	71-121	6	16	
Chlorobenzene	0.0525	0.0578	0.0500	0.0500	105	116	72-123	10	15	
Surrogate:										
Dibromofluoromethane					98	98	74-131			
Toluene-d8					100	97	78-128			
4-Bromofluorobenzene					100	99	71-130			
Laboratory ID:	SB0601S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0530	0.0483	0.0500	0.0500	106	97	55-126	9	17	
Benzene	0.0501	0.0446	0.0500	0.0500	100	89	65-121	12	16	
Trichloroethene	0.0564	0.0531	0.0500	0.0500	113	106	74-126	6	16	
Toluene	0.0521	0.0488	0.0500	0.0500	104	98	71-121	7	16	
Chlorobenzene	0.0490	0.0468	0.0500	0.0500	98	94	72-123	5	15	
Surrogate:										
Dibromofluoromethane					86	82	74-131			
Toluene-d8					96	96	78-128			
4-Bromofluorobenzene					102	107	71-130			
Laboratory ID:	SB0602S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0449	0.0448	0.0500	0.0500	90	90	55-126	0	17	
Benzene	0.0429	0.0430	0.0500	0.0500	86	86	65-121	0	16	
Trichloroethene	0.0492	0.0492	0.0500	0.0500	98	98	74-126	0	16	
Toluene	0.0478	0.0481	0.0500	0.0500	96	96	71-121	1	16	
Chlorobenzene	0.0491	0.0502	0.0500	0.0500	98	100	72-123	2	15	
Surrogate:										
Dibromofluoromethane					89	88	74-131			
Toluene-d8					102	98	78-128			
4-Bromofluorobenzene					109	104	71-130			



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-12					
Laboratory ID:	06-002-05					
Naphthalene	0.018	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
2-Methylnaphthalene	0.0093	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
1-Methylnaphthalene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthylene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Fluorene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Phenanthrene	0.051	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Anthracene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Fluoranthene	0.065	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Pyrene	0.038	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]anthracene	0.015	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Chrysene	0.038	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[b]fluoranthene	0.026	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]pyrene	0.013	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Indeno(1,2,3-c,d)pyrene	0.013	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[g,h,i]perylene	0.015	0.0072	EPA 8270E/SIM	6-2-20	6-2-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>70</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>94</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>49 - 121</i>				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-6					
Laboratory ID:	06-002-20					
Naphthalene	0.047	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
2-Methylnaphthalene	0.085	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
1-Methylnaphthalene	0.061	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthylene	ND	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthene	0.036	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Fluorene	0.067	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Phenanthrene	0.25	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Anthracene	ND	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Fluoranthene	0.11	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Pyrene	0.15	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]anthracene	0.053	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Chrysene	0.10	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[b]fluoranthene	0.082	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo(j,k)fluoranthene	ND	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]pyrene	0.039	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Indeno(1,2,3-c,d)pyrene	0.038	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Dibenz[a,h]anthracene	ND	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[g,h,i]perylene	0.041	0.034	EPA 8270E/SIM	6-2-20	6-2-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	72	46 - 113				
Pyrene-d10	70	45 - 114				
Terphenyl-d14	78	49 - 121				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Fluorene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Anthracene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Pyrene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	6-2-20	6-2-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	46 - 113				
Pyrene-d10	98	45 - 114				
Terphenyl-d14	92	49 - 121				



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
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 Project: Star Forge

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-236-08										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	0.0730	0.0686	0.0833	0.0833	ND	88	82	51 - 115	6	26	
Acenaphthylene	0.0711	0.0645	0.0833	0.0833	ND	85	77	53 - 121	10	24	
Acenaphthene	0.0727	0.0668	0.0833	0.0833	ND	87	80	52 - 121	8	25	
Fluorene	0.0805	0.0755	0.0833	0.0833	ND	97	91	58 - 127	6	23	
Phenanthrene	0.0730	0.0702	0.0833	0.0833	ND	88	84	46 - 129	4	28	
Anthracene	0.0903	0.0892	0.0833	0.0833	ND	108	107	57 - 124	1	21	
Fluoranthene	0.0854	0.0837	0.0833	0.0833	ND	103	100	46 - 136	2	29	
Pyrene	0.0878	0.0837	0.0833	0.0833	ND	105	100	41 - 136	5	32	
Benzo[a]anthracene	0.0921	0.0834	0.0833	0.0833	ND	111	100	56 - 136	10	25	
Chrysene	0.0874	0.0893	0.0833	0.0833	ND	105	107	49 - 130	2	22	
Benzo[b]fluoranthene	0.0884	0.0757	0.0833	0.0833	ND	106	91	51 - 135	15	26	
Benzo(j,k)fluoranthene	0.0873	0.0935	0.0833	0.0833	ND	105	112	56 - 124	7	23	
Benzo[a]pyrene	0.0874	0.0847	0.0833	0.0833	ND	105	102	54 - 133	3	26	
Indeno(1,2,3-c,d)pyrene	0.0813	0.0756	0.0833	0.0833	ND	98	91	52 - 134	7	20	
Dibenz[a,h]anthracene	0.0854	0.0823	0.0833	0.0833	ND	103	99	58 - 127	4	17	
Benzo[g,h,i]perylene	0.0888	0.0855	0.0833	0.0833	ND	107	103	54 - 129	4	21	
Surrogate:											
2-Fluorobiphenyl						76	72	46 - 113			
Pyrene-d10						98	93	45 - 114			
Terphenyl-d14						90	88	49 - 121			



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: AW-2						
Laboratory ID: 06-002-01						
Aroclor 1016	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.096	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	0.50	0.051	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 94 46-125						
Client ID: AW-8						
Laboratory ID: 06-002-02						
Aroclor 1016	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.063	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 101 46-125						
Client ID: AW-4						
Laboratory ID: 06-002-03						
Aroclor 1016	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.052	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 104 46-125						



Date of Report: June 4, 2020
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 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-22					
Laboratory ID:	06-002-04					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.17	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	0.17	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	83	46-125				
Client ID:	AW-12					
Laboratory ID:	06-002-05					
Aroclor 1016	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	88	46-125				
Client ID:	AW-19					
Laboratory ID:	06-002-06					
Aroclor 1016	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.17	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	0.11	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.063	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	87	46-125				



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 Laboratory Reference: 2006-002
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: AW-15						
Laboratory ID: 06-002-07						
Aroclor 1016	ND	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	0.11	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.99	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	0.23	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.076	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.076	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 70 46-125						
Client ID: AW-7						
Laboratory ID: 06-002-08						
Aroclor 1016	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.053	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 86 46-125						
Client ID: AW-21						
Laboratory ID: 06-002-09						
Aroclor 1016	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.053	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.053	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 96 46-125						



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 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: AW-11						
Laboratory ID: 06-002-10						
Aroclor 1016	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.054	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.054	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 102 46-125						
Client ID: AW-9						
Laboratory ID: 06-002-11						
Aroclor 1016	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	0.078	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.23	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	0.39	0.051	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 99 46-125						
Client ID: AW-14						
Laboratory ID: 06-002-12						
Aroclor 1016	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.059	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.059	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB 77 46-125						



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: AW-5						
Laboratory ID: 06-002-13						
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.050	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 84 46-125</i>						
Client ID: AW-3						
Laboratory ID: 06-002-14						
Aroclor 1016	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.28	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	0.12	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.051	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 86 46-125</i>						
Client ID: AW-1						
Laboratory ID: 06-002-15						
Aroclor 1016	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.082	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.060	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.060	EPA 8082A	6-2-20	6-2-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 80 46-125</i>						



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-10					
Laboratory ID:	06-002-16					
Aroclor 1016	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	95	46-125				
Client ID:	AW-13					
Laboratory ID:	06-002-17					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.079	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	0.16	0.050	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	79	46-125				
Client ID:	AW-18					
Laboratory ID:	06-002-18					
Aroclor 1016	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.052	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	105	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-20					
Laboratory ID:	06-002-19					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.14	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	0.10	0.050	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	78	46-125				
Client ID:	AW-6					
Laboratory ID:	06-002-20					
Aroclor 1016	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	0.13	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.051	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	0.085	0.051	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	121	46-125				
Client ID:	AW-16					
Laboratory ID:	06-002-21					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1254	0.42	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-3-20	
Aroclor 1268	0.37	0.050	EPA 8082A	6-2-20	6-3-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	110	46-125				



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PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-17					
Laboratory ID:	06-002-22					
Aroclor 1016	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1221	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1232	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1242	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1248	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1254	1.5	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1260	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1262	ND	0.59	EPA 8082A	6-2-20	6-3-20	
Aroclor 1268	11	0.59	EPA 8082A	6-2-20	6-3-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	46-125				S



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602S1					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	107	46-125				

Laboratory ID:	MB0602S2					
Aroclor 1016	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1221	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1232	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1242	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1248	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1254	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1260	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1262	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Aroclor 1268	ND	0.050	EPA 8082A	6-2-20	6-2-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	87	46-125				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS								
Laboratory ID:	SB0602S1							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.427	0.470	0.500	0.500	N/A	85 94	50-134	10 18
Surrogate:								
DCB	86 90 46-125							
Laboratory ID:	SB0602S2							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.487	0.469	0.500	0.500	N/A	97 94	50-134	4 18
Surrogate:								
DCB	107 107 46-125							



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-2					
Laboratory ID:	06-002-01					
Arsenic	16	10	EPA 6010D	6-2-20	6-3-20	
Barium	140	5.1	EPA 6010D	6-2-20	6-3-20	
Cadmium	2.9	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	1100	2.5	EPA 6010D	6-2-20	6-2-20	
Copper	650	2.0	EPA 6010D	6-2-20	6-3-20	
Lead	190	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	710	13	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	1.0	EPA 6010D	6-2-20	6-3-20	U1
Zinc	550	5.1	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-8					
Laboratory ID:	06-002-02					
Arsenic	55	13	EPA 6010D	6-2-20	6-3-20	
Barium	160	6.3	EPA 6010D	6-2-20	6-3-20	
Cadmium	33	1.3	EPA 6010D	6-2-20	6-3-20	
Chromium	5900	32	EPA 6010D	6-2-20	6-3-20	
Copper	2200	63	EPA 6010D	6-2-20	6-3-20	
Lead	4200	13	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.32	EPA 7471B	6-3-20	6-3-20	
Nickel	3700	160	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	13	EPA 6010D	6-2-20	6-3-20	
Silver	ND	13	EPA 6010D	6-2-20	6-3-20	U1
Zinc	8500	160	EPA 6010D	6-2-20	6-3-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-4					
Laboratory ID:	06-002-03					
Arsenic	15	10	EPA 6010D	6-2-20	6-3-20	
Barium	80	5.2	EPA 6010D	6-2-20	6-3-20	
Cadmium	2.6	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	10000	26	EPA 6010D	6-2-20	6-3-20	
Copper	380	52	EPA 6010D	6-2-20	6-3-20	
Lead	150	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.26	EPA 7471B	6-3-20	6-3-20	
Nickel	2600	130	EPA 6010D	6-2-20	6-3-20	
Selenium	16	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	10	EPA 6010D	6-2-20	6-3-20	U1
Zinc	1200	130	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-22					
Laboratory ID:	06-002-04					
Arsenic	21	10	EPA 6010D	6-2-20	6-3-20	
Barium	460	5.0	EPA 6010D	6-2-20	6-3-20	
Cadmium	10	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	2100	25	EPA 6010D	6-2-20	6-3-20	
Copper	1600	50	EPA 6010D	6-2-20	6-3-20	
Lead	1000	10	EPA 6010D	6-2-20	6-3-20	
Mercury	0.37	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	970	130	EPA 6010D	6-2-20	6-3-20	
Selenium	27	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	10	EPA 6010D	6-2-20	6-3-20	U1
Zinc	3000	130	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-12					
Laboratory ID:	06-002-05					
Arsenic	19	11	EPA 6010D	6-2-20	6-3-20	
Barium	140	5.4	EPA 6010D	6-2-20	6-3-20	
Cadmium	2.2	1.1	EPA 6010D	6-2-20	6-3-20	
Chromium	9400	27	EPA 6010D	6-2-20	6-3-20	
Copper	1100	2.2	EPA 6010D	6-2-20	6-3-20	
Lead	220	11	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.27	EPA 7471B	6-3-20	6-3-20	
Nickel	2400	140	EPA 6010D	6-2-20	6-3-20	
Selenium	27	11	EPA 6010D	6-2-20	6-3-20	
Silver	ND	11	EPA 6010D	6-2-20	6-3-20	U1
Zinc	620	5.4	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-19					
Laboratory ID:	06-002-06					
Arsenic	39	13	EPA 6010D	6-2-20	6-3-20	
Barium	310	6.3	EPA 6010D	6-2-20	6-3-20	
Cadmium	7.4	1.3	EPA 6010D	6-2-20	6-3-20	
Chromium	6100	13	EPA 6010D	6-2-20	6-2-20	
Copper	1800	25	EPA 6010D	6-2-20	6-2-20	
Lead	720	13	EPA 6010D	6-2-20	6-3-20	
Mercury	0.58	0.31	EPA 7471B	6-3-20	6-3-20	
Nickel	3900	63	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	13	EPA 6010D	6-2-20	6-3-20	
Silver	13	1.3	EPA 6010D	6-2-20	6-3-20	
Zinc	1900	63	EPA 6010D	6-2-20	6-2-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-15					
Laboratory ID:	06-002-07					
Arsenic	41	7.6	EPA 6010D	6-2-20	6-2-20	
Barium	680	38	EPA 6010D	6-2-20	6-2-20	
Cadmium	46	1.5	EPA 6010D	6-2-20	6-3-20	
Chromium	4200	7.6	EPA 6010D	6-2-20	6-2-20	
Copper	1700	15	EPA 6010D	6-2-20	6-2-20	
Lead	2400	15	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.38	EPA 7471B	6-3-20	6-3-20	
Nickel	3200	38	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	15	EPA 6010D	6-2-20	6-3-20	
Silver	17	1.5	EPA 6010D	6-2-20	6-3-20	
Zinc	3200	38	EPA 6010D	6-2-20	6-2-20	

Client ID:	AW-7					
Laboratory ID:	06-002-08					
Arsenic	19	11	EPA 6010D	6-2-20	6-3-20	
Barium	86	5.3	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.53	EPA 6010D	6-2-20	6-2-20	
Chromium	2300	5.3	EPA 6010D	6-2-20	6-2-20	
Copper	630	2.1	EPA 6010D	6-2-20	6-3-20	
Lead	130	11	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.27	EPA 7471B	6-3-20	6-3-20	
Nickel	3500	27	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	11	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.3	EPA 6010D	6-2-20	6-3-20	U1
Zinc	170	5.3	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-21					
Laboratory ID:	06-002-09					
Arsenic	32	11	EPA 6010D	6-2-20	6-3-20	
Barium	1900	27	EPA 6010D	6-2-20	6-2-20	
Cadmium	2.2	1.1	EPA 6010D	6-2-20	6-3-20	
Chromium	1700	5.3	EPA 6010D	6-2-20	6-2-20	
Copper	550	2.1	EPA 6010D	6-2-20	6-3-20	
Lead	210	11	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.27	EPA 7471B	6-3-20	6-3-20	
Nickel	2300	27	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	11	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.3	EPA 6010D	6-2-20	6-3-20	U1
Zinc	260	5.3	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-11					
Laboratory ID:	06-002-10					
Arsenic	23	11	EPA 6010D	6-2-20	6-3-20	
Barium	48	5.4	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.54	EPA 6010D	6-2-20	6-2-20	
Chromium	8800	27	EPA 6010D	6-2-20	6-3-20	
Copper	1400	54	EPA 6010D	6-2-20	6-3-20	
Lead	66	11	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.27	EPA 7471B	6-3-20	6-3-20	
Nickel	6600	130	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	11	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.4	EPA 6010D	6-2-20	6-3-20	U1
Zinc	170	5.4	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-9					
Laboratory ID:	06-002-11					
Arsenic	45	10	EPA 6010D	6-2-20	6-3-20	
Barium	97	5.1	EPA 6010D	6-2-20	6-3-20	
Cadmium	6.5	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	4000	26	EPA 6010D	6-2-20	6-3-20	
Copper	1900	51	EPA 6010D	6-2-20	6-3-20	
Lead	410	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.26	EPA 7471B	6-3-20	6-3-20	
Nickel	5800	130	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.1	EPA 6010D	6-2-20	6-3-20	U1
Zinc	400	5.1	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-14					
Laboratory ID:	06-002-12					
Arsenic	15	12	EPA 6010D	6-2-20	6-3-20	
Barium	150	5.9	EPA 6010D	6-2-20	6-3-20	
Cadmium	3.3	1.2	EPA 6010D	6-2-20	6-3-20	
Chromium	2700	5.9	EPA 6010D	6-2-20	6-2-20	
Copper	510	2.4	EPA 6010D	6-2-20	6-3-20	
Lead	190	12	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.29	EPA 7471B	6-3-20	6-3-20	
Nickel	1700	29	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	12	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.9	EPA 6010D	6-2-20	6-3-20	U1
Zinc	290	5.9	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-5					
Laboratory ID:	06-002-13					
Arsenic	65	10	EPA 6010D	6-2-20	6-3-20	
Barium	20	5.0	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.50	EPA 6010D	6-2-20	6-2-20	
Chromium	70000	250	EPA 6010D	6-2-20	6-3-20	
Copper	1400	50	EPA 6010D	6-2-20	6-3-20	
Lead	110	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	13000	130	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	20	EPA 6010D	6-2-20	6-3-20	U1
Silver	ND	10	EPA 6010D	6-2-20	6-3-20	U1
Zinc	230	5.0	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-3					
Laboratory ID:	06-002-14					
Arsenic	50	10	EPA 6010D	6-2-20	6-3-20	
Barium	99	5.1	EPA 6010D	6-2-20	6-3-20	
Cadmium	2.8	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	5400	10	EPA 6010D	6-2-20	6-2-20	
Copper	2300	21	EPA 6010D	6-2-20	6-2-20	
Lead	310	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.26	EPA 7471B	6-3-20	6-3-20	
Nickel	6400	51	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.1	EPA 6010D	6-2-20	6-3-20	U1
Zinc	590	5.1	EPA 6010D	6-2-20	6-3-20	



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TOTAL METALS
EPA 6010D/7471B

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-1					
Laboratory ID:	06-002-15					
Arsenic	17	12	EPA 6010D	6-2-20	6-3-20	
Barium	90	6.0	EPA 6010D	6-2-20	6-3-20	
Cadmium	4.2	1.2	EPA 6010D	6-2-20	6-3-20	
Chromium	2300	6.0	EPA 6010D	6-2-20	6-2-20	
Copper	690	2.4	EPA 6010D	6-2-20	6-3-20	
Lead	1400	12	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.30	EPA 7471B	6-3-20	6-3-20	
Nickel	2300	30	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	12	EPA 6010D	6-2-20	6-3-20	
Silver	ND	1.2	EPA 6010D	6-2-20	6-3-20	U1
Zinc	390	6.0	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-10					
Laboratory ID:	06-002-16					
Arsenic	29	10	EPA 6010D	6-2-20	6-3-20	
Barium	13	5.1	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.51	EPA 6010D	6-2-20	6-2-20	
Chromium	4200	25	EPA 6010D	6-2-20	6-3-20	
Copper	2800	51	EPA 6010D	6-2-20	6-3-20	
Lead	84	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	8600	130	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	20	EPA 6010D	6-2-20	6-2-20	U1
Silver	ND	10	EPA 6010D	6-2-20	6-3-20	U1
Zinc	120	5.1	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-13					
Laboratory ID:	06-002-17					
Arsenic	37	10	EPA 6010D	6-2-20	6-3-20	
Barium	57	5.0	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.50	EPA 6010D	6-2-20	6-2-20	
Chromium	4700	10	EPA 6010D	6-2-20	6-2-20	
Copper	1500	20	EPA 6010D	6-2-20	6-2-20	
Lead	110	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	7400	50	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-2-20	
Silver	ND	5.0	EPA 6010D	6-2-20	6-3-20	U1
Zinc	170	5.0	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-18					
Laboratory ID:	06-002-18					
Arsenic	14	10	EPA 6010D	6-2-20	6-3-20	
Barium	75	5.2	EPA 6010D	6-2-20	6-3-20	
Cadmium	ND	0.52	EPA 6010D	6-2-20	6-2-20	
Chromium	390	1.0	EPA 6010D	6-2-20	6-3-20	
Copper	2900	10	EPA 6010D	6-2-20	6-2-20	
Lead	53	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.26	EPA 7471B	6-3-20	6-3-20	
Nickel	4400	26	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	1.0	EPA 6010D	6-2-20	6-3-20	U1
Zinc	93	5.2	EPA 6010D	6-2-20	6-3-20	



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 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-20					
Laboratory ID:	06-002-19					
Arsenic	47	10	EPA 6010D	6-2-20	6-3-20	
Barium	110	5.0	EPA 6010D	6-2-20	6-3-20	
Cadmium	1.8	1.0	EPA 6010D	6-2-20	6-3-20	
Chromium	2900	5.0	EPA 6010D	6-2-20	6-3-20	
Copper	1700	10	EPA 6010D	6-2-20	6-2-20	
Lead	480	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	5000	25	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	10	EPA 6010D	6-2-20	6-3-20	
Silver	ND	5.0	EPA 6010D	6-2-20	6-3-20	U1
Zinc	340	5.0	EPA 6010D	6-2-20	6-3-20	

Client ID:	AW-6					
Laboratory ID:	06-002-20					
Arsenic	54	10	EPA 6010D	6-2-20	6-3-20	
Barium	60	5.1	EPA 6010D	6-2-20	6-3-20	
Cadmium	0.54	0.51	EPA 6010D	6-2-20	6-2-20	
Chromium	2000	25	EPA 6010D	6-2-20	2-20-20	
Copper	1200	51	EPA 6010D	6-2-20	6-3-20	
Lead	200	10	EPA 6010D	6-2-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	3800	130	EPA 6010D	6-2-20	6-3-20	
Selenium	ND	15	EPA 6010D	6-2-20	6-2-20	U1
Silver	ND	1.0	EPA 6010D	6-2-20	6-3-20	U1
Zinc	260	5.1	EPA 6010D	6-2-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-16					
Laboratory ID:	06-002-21					
Arsenic	42	10	EPA 6010D	6-1-20	6-3-20	
Barium	83	5.0	EPA 6010D	6-1-20	6-3-20	
Cadmium	6.4	1.0	EPA 6010D	6-1-20	6-3-20	
Chromium	7700	25	EPA 6010D	6-1-20	6-1-20	
Copper	3200	50	EPA 6010D	6-1-20	6-1-20	
Lead	300	10	EPA 6010D	6-1-20	6-3-20	
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	
Nickel	8000	130	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	10	EPA 6010D	6-1-20	6-3-20	
Silver	ND	5.0	EPA 6010D	6-1-20	6-3-20	U1
Zinc	990	130	EPA 6010D	6-1-20	6-1-20	

Client ID:	AW-17					
Laboratory ID:	06-002-22					
Arsenic	110	12	EPA 6010D	6-1-20	6-3-20	
Barium	300	5.9	EPA 6010D	6-1-20	6-3-20	
Cadmium	7.2	1.2	EPA 6010D	6-1-20	6-3-20	
Chromium	2800	5.9	EPA 6010D	6-1-20	6-1-20	
Copper	2600	12	EPA 6010D	6-1-20	6-1-20	
Lead	820	12	EPA 6010D	6-1-20	6-3-20	
Mercury	ND	0.29	EPA 7471B	6-3-20	6-3-20	
Nickel	1900	29	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	12	EPA 6010D	6-1-20	6-3-20	
Silver	ND	5.9	EPA 6010D	6-1-20	6-3-20	U1
Zinc	1700	29	EPA 6010D	6-1-20	6-1-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0601SH1					
Arsenic	ND	5.0	EPA 6010D	6-1-20	6-1-20	
Barium	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Cadmium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Chromium	ND	0.50	EPA 6010D	6-1-20	6-1-20	
Copper	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Lead	ND	5.0	EPA 6010D	6-1-20	6-1-20	
Nickel	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Selenium	ND	5.0	EPA 6010D	6-1-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-1-20	6-1-20	
Zinc	ND	2.5	EPA 6010D	6-1-20	6-1-20	
Laboratory ID:	MB0603S2					
Mercury	ND	0.25	EPA 7471B	6-1-20	6-1-20	
Laboratory ID:	MB0602SH1					
Arsenic	ND	5.0	EPA 6010D	6-2-20	6-2-20	
Barium	ND	2.5	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.50	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.50	EPA 6010D	6-2-20	6-2-20	
Copper	ND	1.0	EPA 6010D	6-2-20	6-2-20	
Lead	ND	5.0	EPA 6010D	6-2-20	6-2-20	
Nickel	ND	2.5	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	5.0	EPA 6010D	6-2-20	6-2-20	
Silver	ND	1.0	EPA 6010D	6-2-20	6-2-20	
Zinc	ND	2.5	EPA 6010D	6-2-20	6-2-20	
Laboratory ID:	MB0603S1					
Mercury	ND	0.25	EPA 7471B	6-3-20	6-3-20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-232-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	224	237	NA	NA	NA	5	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	25.1	28.5	NA	NA	NA	13	20	
Copper	29.6	29.0	NA	NA	NA	2	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Nickel	22.0	27.2	NA	NA	NA	21	20	L
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	67.1	70.9	NA	NA	NA	5	20	
Laboratory ID:	06-002-21							
Mercury	ND	ND	NA	NA	NA	NA	20	
Laboratory ID:	06-002-07							
	ORIG	DUP						
Arsenic	27.0	25.0	NA	NA	NA	8	20	
Barium	445	549	NA	NA	NA	21	20	L
Cadmium	29.9	33.4	NA	NA	NA	11	20	
Chromium	2780	2400	NA	NA	NA	15	20	
Copper	1140	1410	NA	NA	NA	21	20	L
Lead	1550	1660	NA	NA	NA	7	20	
Nickel	2130	2480	NA	NA	NA	15	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	11.2	11.6	NA	NA	NA	4	20	
Zinc	2130	2310	NA	NA	NA	8	20	
Laboratory ID:	06-002-01							
Mercury	ND	ND	NA	NA	NA	NA	20	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

					Source	Percent	Recovery		RPD		
Analyte	Result		Spike Level		Result	Recovery		Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-232-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	90.6	89.5	100	100	ND	91	90	75-125	1	20	
Barium	343	345	100	100	224	119	120	75-125	0	20	
Cadmium	44.8	45.0	50.0	50.0	ND	90	90	75-125	0	20	
Chromium	99.8	102	100	100	25.1	75	77	75-125	2	20	
Copper	77.4	78.1	50.0	50.0	29.6	96	97	75-125	1	20	
Lead	205	208	250	250	ND	82	83	75-125	1	20	
Nickel	99.9	105	100	100	22.0	78	83	75-125	5	20	
Selenium	75.3	87.5	100	100	ND	75	88	75-125	15	20	
Silver	20.0	19.9	25.0	25.0	ND	80	79	75-125	1	20	
Zinc	157	158	100	100	67.1	90	91	75-125	1	20	
Laboratory ID:	6-002-21										
Mercury	0.525	0.515	0.500	0.500	0.0522	95	93	80-120	2	20	
Laboratory ID:	06-002-07										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	121	119	100	100	27.0	94	92	75-125	1	20	
Barium	593	479	100	100	445	148	34	75-125	21	20	A,W
Cadmium	77.9	79.3	50.0	50.0	29.9	96	99	75-125	2	20	
Chromium	2400	2790	100	100	2780	-376	7	75-125	15	20	A
Copper	1310	1450	50.0	50.0	1140	334	617	75-125	10	20	A
Lead	1570	1630	250	250	1550	9	30	75-125	3	20	A
Nickel	2180	2330	100	100	2130	54	205	75-125	7	20	A
Selenium	92.7	91.0	100	100	ND	93	91	75-125	2	20	
Silver	33.0	34.5	25.0	25.0	11.2	87	93	75-125	4	20	
Zinc	2410	2040	100	100	2130	283	-86	75-125	17	20	A
Laboratory ID:	06-002-01										
Mercury	0.597	0.588	0.500	0.500	0.110	97	96	80-120	2	20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-2					
Laboratory ID:	06-002-01					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.62	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-8					
Laboratory ID:	06-002-02					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.72	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.021	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.26	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-4					
Laboratory ID:	06-002-03					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.30	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.076	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-22					
Laboratory ID:	06-002-04					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.46	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.58	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-12					
Laboratory ID:	06-002-05					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.54	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-19					
Laboratory ID:	06-002-06					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	1.0	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.021	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.059	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-15					
Laboratory ID:	06-002-07					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	1.8	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.25	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-7					
Laboratory ID:	06-002-08					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.56	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-21					
Laboratory ID:	06-002-09					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	1.0	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.057	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-11					
Laboratory ID:	06-002-10					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.56	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.050	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-9					
Laboratory ID:	06-002-11					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.64	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.053	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-14					
Laboratory ID:	06-002-12					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.88	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.039	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



Date of Report: June 4, 2020
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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-5					
Laboratory ID:	06-002-13					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.46	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.046	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.22	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-3					
Laboratory ID:	06-002-14					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.55	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.028	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-1					
Laboratory ID:	06-002-15					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.51	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.12	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.10	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	2.8	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



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TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-10					
Laboratory ID:	06-002-16					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.37	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.029	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.12	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-13					
Laboratory ID:	06-002-17					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.76	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.13	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-18					
Laboratory ID:	06-002-18					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.38	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.020	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	



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 Laboratory Reference: 2006-002
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-20					
Laboratory ID:	06-002-19					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.64	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.040	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.024	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-6					
Laboratory ID:	06-002-20					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	0.68	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	0.023	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	0.076	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	

Client ID:	AW-16					
Laboratory ID:	06-002-21					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.49	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	0.038	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	AW-17					
Laboratory ID:	06-002-22					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	0.54	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	



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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602TM1					
Arsenic	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Barium	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Cadmium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Chromium	ND	0.020	EPA 6010D	6-2-20	6-2-20	
Lead	ND	0.20	EPA 6010D	6-2-20	6-2-20	
Selenium	ND	0.40	EPA 6010D	6-2-20	6-2-20	
Silver	ND	0.040	EPA 6010D	6-2-20	6-2-20	
Laboratory ID:	MB0602T1					
Mercury	ND	0.0050	EPA 7470A	6-2-20	6-2-20	



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TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603TM1					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	
Laboratory ID:	MB0603T1					
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Laboratory ID:	MB0603TM2					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	
Laboratory ID:	MB0603T2					
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	
Laboratory ID:	MB0603TM3					
Arsenic	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Barium	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Cadmium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Chromium	ND	0.020	EPA 6010D	6-3-20	6-3-20	
Lead	ND	0.20	EPA 6010D	6-3-20	6-3-20	
Selenium	ND	0.40	EPA 6010D	6-3-20	6-3-20	
Silver	ND	0.040	EPA 6010D	6-3-20	6-3-20	
Laboratory ID:	MB0603T3					
Mercury	ND	0.0050	EPA 7470A	6-3-20	6-3-20	



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 Samples Submitted: June 1, 2020
 Laboratory Reference: 2006-002
 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-208-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	ND	ND	NA	NA		NA	NA	NA	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	0.684	0.654	NA	NA		NA	NA	4	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	05-208-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-002-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	0.616	0.624	NA	NA		NA	NA	1	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-002-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	



Date of Report: June 4, 2020
 Samples Submitted: June 1, 2020
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 Project: Star Forge

TCLP METALS
EPA 1311/6010D/7470A
QUALITY CONTROL

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	05-208-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.79	3.78	4.00	4.00	ND	95	95	75-125	0	20
Barium	3.69	3.67	4.00	4.00	ND	92	92	75-125	1	20
Cadmium	1.96	1.95	2.00	2.00	ND	98	98	75-125	1	20
Chromium	4.21	4.21	4.00	4.00	0.684	88	88	75-125	0	20
Lead	8.54	8.50	10.0	10.0	ND	85	85	75-125	0	20
Selenium	3.88	3.91	4.00	4.00	ND	97	98	75-125	1	20
Silver	0.904	0.908	1.00	1.00	ND	90	91	75-125	0	20
Laboratory ID:	05-208-01									
Mercury	0.0490	0.0497	0.0500	0.0500	ND	98	99	75-125	1	20
Laboratory ID:	06-002-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	3.95	3.90	4.00	4.00	ND	99	98	75-125	1	20
Barium	4.24	4.29	4.00	4.00	0.616	91	92	75-125	1	20
Cadmium	1.96	1.96	2.00	2.00	ND	98	98	75-125	0	20
Chromium	3.50	3.52	4.00	4.00	ND	88	88	75-125	1	20
Lead	8.14	8.22	10.0	10.0	ND	81	82	75-125	1	20
Selenium	4.15	4.35	4.00	4.00	ND	104	109	75-125	5	20
Silver	0.908	0.918	1.00	1.00	ND	91	92	75-125	1	20
Laboratory ID:	06-002-01									
Mercury	0.0476	0.0477	0.0500	0.0500	ND	95	95	75-125	0	20



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
AW-2	06-002-01	1	6-2-20
AW-8	06-002-02	21	6-2-20
AW-4	06-002-03	3	6-2-20
AW-22	06-002-04	1	6-2-20
AW-12	06-002-05	8	6-2-20
AW-19	06-002-06	20	6-2-20
AW-15	06-002-07	35	6-2-20
AW-7	06-002-08	6	6-2-20
AW-21	06-002-09	6	6-2-20
AW-11	06-002-10	7	6-2-20
AW-9	06-002-11	3	6-2-20
AW-14	06-002-12	15	6-2-20
AW-5	06-002-13	0	6-2-20
AW-3	06-002-14	3	6-2-20
AW-1	06-002-15	17	6-2-20
AW-10	06-002-16	1	6-2-20
AW-13	06-002-17	0	6-2-20
AW-18	06-002-18	3	6-2-20
AW-20	06-002-19	1	6-2-20
AW-6	06-002-20	2	6-2-20
AW-16	06-002-21	1	6-2-20
AW-17	06-002-22	15	6-2-20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company: DH Environmental

Project Number: _____

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Maxley / B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: 06-002

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA Metals + Cu, Ni, Zn	Total MTCA Metals	TCLP Metals RCRA 8	HEM (oil and grease) 1664A	% Moisture
1	AW-2	6/1/20	0655	Solids	5					X					X				X	X			X
2	AW-8		0705																				
3	AW-4		0715																				
4	AW-22		0725																				
5	AW-12		0735										X										
6	AW-19		0750																				
7	AW-15		0755																				
8	AW-7		0805																				
9	AW-21		0815																				
10	AW-11		0820																				

Signature	Company	Date	Time	Comments/Special Instructions
	DH Env.	6-1-20	11:10	
	OGE	6/1/20	11:10	

Reviewed/Date: _____ Reviewed/Date: _____

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Company: DH Environmental

Project Number: _____

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Moxley / B. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Laboratory Number: 06-002					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	AW-9	6/1/20	0830	Slits	5
12	AW-14		0840		
13	AW-5		0850		
14	AW-3		0900		
15	AW-1		0910		
16	AW-10		0920		
17	AW-13		0930		
18	AW-18		0940		
19	AW-20		0950		
20	AW-6		1005		

Signature	Company	Date	Time	Comments/Special Instructions
	DH Env.	6-1-20	11:10	
	DBE	6/1/20	11:10	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☐ Level III ☐ Level IV ☐ Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		

Chain of Custody

Company: OH Environmental

Project Number:

Project Name: Star Forge

Project Manager: Dave Hill

Sampled by: N. Moxley / D. Johnson

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☐ _____ (other)

Number of Containers

Laboratory Number:

06-002

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix		NWTPH-HClD	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (□ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals + Cu, Ni, Zn	Total MTCA Metals	TCLP Metals <u>PERA 8</u>	HEM (oil and grease) 1664A				% Moisture
21	AW-16	6/1/20	1020	Solids	5					X					X				X	X						X
22	AW-17	↓	0640	↓	↓					X					X				X	X						↓

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>OH Env.</u>	<u>6-1-20</u>	<u>11:10</u>	
<u>[Signature]</u>	<u>OH Env.</u>	<u>6/1/20</u>	<u>11:00</u>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Data Package: Standard ☐ Level III ☐ Level IV ☐		
		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		

Former Jorgensen Forge Facility Clean Closure Sampling Analysis Plan

**Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA 98108**

Prepared For:

Star Forge, LLC
8531 E Marginal Way S.
Tukwila, WA 98108

Prepared By:

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May 2020

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Section 1: INTRODUCTION

DH Environmental, Inc. (DH Environmental) has prepared this Sampling and Analysis Plan (SAP) on behalf of Star Forge, LLC (Star Forge), for documentation of Clean Closure of the Former Jorgensen Forge Facility located at 8531 E Marginal Way S., in Tukwila, Washington 98108 (Facility; Figure 1).

The purpose of this sampling effort is to demonstrate Clean Closure of the applicable Dangerous Waste Management Units (DWMUs; Figure 2) in accordance with WAC 173-303-610(2) and (5). In addition, suspect materials and areas at the facility will be sampled for the purpose of Waste Designation in accordance with WAC 173-303-070.

This SAP has been prepared to describe the specific sampling and analysis protocols to be followed during sampling efforts. These protocols are pursuant to the requirements of WAC 173-303-070, the technical requirements of EPA publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, and the Washington State Department of Ecology (Ecology) Publication #97-407, revised December 2014, *Chemical Testing Methods for Designating Dangerous Waste* and Ecology Publication 94-111, *Guidance for Clean Closure of Dangerous Waste Units and Facilities* (2005).

The SAP describes the sample collection program, including the design and implementation of the proposed sampling; sample collection, handling, and analysis procedures; and quality assurance and quality control (QA/QC) requirements. The QA/QC protocols described here are necessary to achieve the site-specific objectives for sample collection and analysis. Records must be maintained documenting all sampling activities performed and data generated during implementation of this waste characterization SAP.

This SAP was developed and intended to be used for Clean Closure documentation and waste designation sampling only. Other site-specific project documents may also govern work conducted at the Site (e.g., health and safety plan, RI/FS work plans, etc.).

1.1 PROJECT ORGANIZATION

This section identifies key individuals and their responsibilities for all sampling efforts on the project.

Key personnel involved in the SAP activities and their roles and responsibilities are summarized below:

- Star Forge Project Manager: James Robertson (281.785.7875)
- DH Environmental Project Manager: David Hill, PE, CHMM, CPEA (206.293.3126)
- DH Environmental Project Geologist: Nathan Moxley, LG, LHG (509.332.9281)
- DH Environmental Health and Safety Manager: Brian Johnson, OHST, CET (206.930.4043)
- OnSite Environmental/Laboratory Project Manager: David Baumeister (425.883.3881)

OnSite Environmental, Inc. of Redmond, Washington, is a Washington State accredited environmental laboratory.

1.2 ENVIRONMENTAL CONSULTANT

The environmental consultant conducting the sampling activities will complete the following tasks:

- Communicate data quality objectives to the analytical laboratory analyzing samples collected from the Site.
- Assemble project teams, implement sample collection activities, and coordinate sample analyses.
- Ensure that the proper number, type, and quantity of sample containers, including preservation requirements, are available for field activities.
- Follow standard sampling protocols as defined in this SAP and other relevant site-specific project documents.
- Record and document all field data as specified in this SAP.
- Following applicable Standard Operating Procedures (SOPs), ensure that all samples are collected, preserved, labeled, packaged, and shipped to the contract analytical laboratory in an appropriate manner.
- Review analytical laboratory results and Quality Control (QC) data.
- Where applicable, report deficiencies in sample collection, preservation, handling, test methods, or documentation.
- Initiate and support technical audits and corrective action that may arise from deficiencies in sample collection, preservation, handling, test methods, or documentation.

1.3 ANALYTICAL LABORATORY

The analytical laboratory analyzing and reporting results for samples collected from the Site will:

- Understand and follow sampling objectives outlined in this SAP.
- Perform requested analyses using appropriate test methods specified in this SAP.
- Prepare analytical laboratory reports for the environmental consultant, including all relevant data and QC reports.
- Communicate analytical problems, issues, or concerns to the environmental consultant in a timely manner.
- Initiate corrective action when deficiencies in sample collection, preservation, handling, test methods, or documentation are identified internally by the contract analytical laboratory, or by the environmental consultant.

Section 2: PROJECT DESCRIPTION AND BACKGROUND

2.1 BACKGROUND¹

The Jorgensen Forge Site is approximately 21.6 acres, located in an industrial area along the east bank of the Lower Duwamish Waterway. The site is bordered to the north by the Boeing Plant 2 property, and to the south by the Boeing Isaacson property. It is bordered to the west by the Lower Duwamish Waterway, and to the east by East Marginal Way South and the King County Regional Airport.

The property was used from 1942-1965 for fabrication of structural steel, tractor and road equipment. Operations at the site included forging and heat-treating by Isaacson Iron Works, which operated as a U.S. naval vessel manufacturer.

The property was owned and operated by Earle M. Jorgensen Company from 1965 until 1992, when it was purchased by the plant management group and became the Jorgensen Forge Corporation. Jorgensen manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. They also processed nickel, titanium, and specialized alloys.

Following a bankruptcy settlement in 2016, Star Forge purchased the facility and began Clean Closure Activities in 2018. Although Clean Closure activities are being conducted by Star Forge, Earle M. Jorgensen Company (EMJ) is under an Agreed Order with the Washington State Department of Ecology to complete a remedial investigation and feasibility study (RI/FS) and a cleanup action plan to remediate legacy contamination at the site.

Contamination at the site is primarily the result of heavy industrial use since the 1940's, and contaminated groundwater migrating onto the property from off-site sources.

Contaminants of concern at the site include:

- Polychlorinated biphenyls (PCBs)
- Volatile organic compounds (VOCs)
- Halogenated volatile organic compounds (HVOCs)
- Metals (including arsenic, cadmium, chromium, lead, nickel, copper, and zinc)

2.2 PROJECT DESCRIPTION

Star Forge intends to demolish the structures at the site as a prerequisite to selling the property. Star Forge is conducting hazardous building materials abatement and Dangerous Waste Clean Closure necessary to obtain demolition permits. The Clean Closure efforts are considered a requirement of the Dangerous Waste Regulations and are not being conducted as part of the larger legacy contamination investigation and cleanup being concurrently conducted by EMJ.

¹ Information in this section was derived from the Washington State Department of Ecology's Jorgensen Forge Corp. Site Information webpage page: <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=3689>

The purpose of this sampling effort is to demonstrate Clean Closure of the applicable Dangerous Waste Management Units and designate any suspect materials and areas at the facility in accordance with WAC 173-303-070.

2.3 SAMPLING TARGET AREAS AND MATERIALS

Sampling is designed to target dangerous waste management units, and additional areas/material of concern identified across the facility. Each area targeted for sampling is described below.

2.3.1 Dangerous Waste Management Units

For the purposes of Clean Closure in accordance with the Dangerous Waste Regulations, we have identified the following Dangerous Waste Management Units subject to Clean Closure. These areas have been identified by historical documents and interviews with facility staff that worked at the facility when it was operational. Figure 2 shows the locations of the Dangerous Waste Management Units.

Each of the Dangerous Waste Management Units have been emptied and cleaned. The concrete floors of each unit were then cleaned using a high-pressure steam and hot water wash. Concrete wash water was contained and captured using a vacuum truck. Any waste generated as part of the cleaning process will be designated and disposed of at a properly permitted disposal facility and the documentation will be included in the final clean closure report.

Central Accumulation Area

The Central Accumulation Area (CAA) is one of two 90/180-day Dangerous Waste accumulation areas. The CAA is an approximately 1,000 SF structure with aluminum siding, a concrete slab and an approximately 1 ft. concrete base wall that served as secondary containment. The CAA stored Dangerous Waste in drums and small containers generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time contained a 300 gallon above ground storage tank that served diesel fuel. Subsequently, the structure was also known as the “diesel house”.

Tote Storage Central Accumulation Area

The Tote Storage Central Accumulation Area (Tote Storage Area) is the other 90/180-day Dangerous Waste accumulation area. The Tote Storage Area is located north of the west end of the main building, between the main building and the baghouse. The Tote Storage Area is an approximately 800 ft² structure with wooden siding and a concrete slab floor. The Tote Storage Area stored Dangerous Waste and used oil totes and drums generated from facility maintenance and operations. Based on historical documents and interviews with facility staff, the structure at one time was used to clean and etch product samples prior to laboratory testing. Subsequently, the structure was also known as the “Acid House” or “Etch House” before it was used as a 90/180-day Dangerous Waste accumulation area in the 1990s.

Baghouse and Baghouse Processing Area

The baghouse and baghouse processing area are located north of the west end of the main building and tote storage building. The baghouse building is approximately 4,000 ft², and housed equipment to capture and contain dust from the baghouse tunnel that conveyed air and dust from the former melt shop to the baghouse. The baghouse dust was designated as a K061 waste stream as it meets the

definition of K061 Specific Source Waste from iron and steel sources in accordance with WAC 173-303-9904.

The baghouse processing area and concrete slab is divided by a wall thereby creating two separate areas denoted as Baghouse North and Baghouse South for the purposes of cleaning and sampling.

A subsurface utility trench was also located adjacent to the Baghouse, running parallel with the building along its east side. The utility trench is approximately 2-feet wide by 2-feet deep, and lined with concrete. The trench is covered by removable steel plates, and over the years of operations, material had accumulated in the trench. This material was removed using shovels, and the trench was cleaned using a hot pressure washer and a vacuum truck. The solids were placed into supersacks for designation and disposal, and the wash water liquids were placed into a tote.

2.3.2 Targeted Areas and Materials of Concern

Several areas and materials of concern were identified across the facility during site inspections, a review of historical operations, and interviews with former employees.

Melt Shop/Forge Shop Pits

The former Melt Shop and Forge Shop areas of the facility contain numerous subsurface process pits. Three of these pits were identified and targeted for sampling because the interior of the pits contain residual slag-like material, possibly from past forging operations.

Machine Shop Concrete Stockpile

During previous site closure activities, a stockpile of broken concrete debris was placed in the Machine Shop. The source of this concrete was from the Heat Treat Area located to the south. The material was targeted for sampling in order to properly designate the waste for disposal.

Underground Storage Tanks

Star Forge has previously identified 18 USTs at the Facility potentially subject to regulation under Washington State's UST regulations, WAC 173-360A. The USTs include UST-15 through UST-22, and UST-26 through UST-35. These tanks are associated with Ecology UST identification number 6163. The USTs are grouped into a North Tank Farm area (UST-26 through -35) and a South Tank Farm area (UST-15 through -22), as shown on Figure 8.

Samples will be collected from the liquids or solids in the tanks, if present, to properly designate the waste for disposal. In addition, fragments of metal slag-like material were observed to be covering the tanks, and this material will also be sampled for designation and disposal purposes.

Area Wide Statistical Sampling

The interior of the main structure comprising the former melt shop, forge shop, and the heat treat area is shown in Figure 2. Star Forge conducted extensive removal of dust, fine particles, and exposed soil (henceforth "area wide dust") from the floor, trusses, and other structural surfaces during 2019 to early 2020. The area wide dust has been referred to as process waste in previous documents and correspondence. This material is a mixture of dust, fine particulates, soil "track-in" and exposed soil that accumulated throughout the facility over many years of operation. The material is not a waste stream that was generated from any one process or unit operation.

Previous designation of this material is based on total metals, TCLP metals and total PCBs. This waste stream previously “passed” TCLP for RCRA 8 metals. However, the total metals content caused the area-wide dust to “book designate” as a Toxic Criteria Dangerous Waste and was assigned WA State Dangerous Waste number WT02. A fish bioassay was not conducted to refute the book designation. Therefore, the WT02 designation was assumed and approximately 2,500,000 lbs. of the area wide dust were removed and disposed of as WA State Toxic Criteria WT02 waste during 2019 and early 2020.

Although most of the area wide dust has been removed from the facility interior, some of this material remains on the floor of the facility and has possibly comingled with areas of exposed soil. Therefore, an area wide statistical analysis of the dust, fine particles, and exposed soil will be conducted to designate the remaining material so that it can be properly managed during the forthcoming demolition of the structures.

Section 3: SAMPLING DESIGN

3.1 DANGEROUS WASTE MANAGEMENT UNITS

The objective of the sampling design of the dangerous waste management units is to determine if the concrete floor surfaces have been adequately cleaned, and to determine if the concrete itself designates as dangerous waste. The Dangerous Waste Management units include the former Central Accumulation Area, Tote Storage Area, and the Baghouse.

The sampling design for the Central Accumulation Area, Tote Storage Area, and the northern portion of the baghouse will consist of gridding each area into four quadrants. The southern portion of the baghouse will be gridded into six equal sized areas due to its larger size. The concrete utility trench east of the baghouse will be divided into three equally spaced intervals along the length of the trench.

A minimum of one sample will be collected from the concrete floor surface in each of the sampling grids. Each sample will be collected from areas of staining, if present. If no areas of staining are present, the sample will be collected from the center of each grid.

3.2 MELT SHOP/FORGE SHOP PITS

Three pits were observed to contain slag-like material in the former Melt Shop area. These include the AOD Pit, the Arc Furnace Pit, and the Ingot Mold Pit.

A minimum of three samples will be collected from slag-like material in the AOD Pit and Arc Furnace Pit. In addition, a white fibrous material will also be sampled from the upper portions of the south wall of the AOD Pit. A minimum of two samples of the slag-like material will be collected from the Ingot Mold Pit.

3.3 MACHINE SHOP CONCRETE STOCKPILE

A pile of concrete debris located in the Machine Shop area was previously sampled by SoundEarth Strategies, Inc. (SoundEarth). A minimum of one composite sample will be collected from the concrete pile to confirm the results of the previous sampling, and to perform additional analysis for Dangerous Waste Fish Bioassay, if necessary. The composite sample will be collected from four to six locations around the stockpile.

3.4 UNDERGROUND STORAGE TANKS

Samples will be collected from each of the USTs containing liquids or solids. Three of the USTs had previously been closed in place and were filled with sand. A minimum of one sample will be collected from each of the USTs to designate the contents for disposal.

3.5 AREA WIDE STATISTICAL SAMPLING

The Area Wide sampling has been designed as a random sampling plan in accordance with EPA Publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (EPA SW846). Previous sampling at the facility indicated concentrations of total lead and chromium in dust/soil in the Melt and Forge shop areas ranged up to 3,830 milligrams per kilogram (mg/kg) for chromium and up to 1,270 mg/kg for lead. Additionally, this same material was previously designated with a WT02 waste code due to an equivalent concentration greater than 0.001%, primarily based on

the concentration of total metals. Therefore, the focus of this sampling design is to determine if the soil will designate as characteristic waste for any of the RCRA 8 metals (Resource Conservation and Recovery Act list of eight metals [Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver]) and be subject to Federal Land Disposal Restrictions.

The number of samples and location of sample points prescribed for this sampling plan was calculated using Visual Sampling Plan (VSP), a statistical sampling software package developed by the Pacific Northwest National Laboratory. A non-parametric random sampling plan was chosen for this site because spatial distribution of potential contamination is unknown, and due to the potential heterogeneous nature of the material.

Null Hypothesis. For this sampling design, we have chosen to assume the site is unacceptable (i.e., it will designate as RCRA Hazardous Waste) until proven otherwise. The working hypothesis (or 'null' hypothesis) is that the median concentration of leachable lead and chromium (e.g., lead and chromium concentrations in leachate after performing a Toxicity Characteristic Leaching Procedure [TCLP] test, Environmental Protection Agency [EPA] Method 1311) at the site is equal to or greater than the threshold of 5 milligrams per liter (mg/L). The alternative hypothesis is that the median TCLP lead and chromium concentrations are less than 5 mg/L.

In other words, if the data do not indicate with at least 95% confidence that the true median TCLP lead and chromium concentrations are less than 5 mg/L, the null hypothesis will not be rejected, and we will thus conclude that the soil is RCRA Hazardous Waste for Characteristic of Lead or Chromium Toxicity.

Although the design basis is lead and chromium, the results of all of the RCRA 8 metals can be evaluated statistically once the data is available. A design basis must be chosen however; and lead and chromium were chosen due to their prevalence in historical data.

The same null hypothesis will also be evaluated for the concentration of the other leachable RCRA 8 metals and total polychlorinated biphenyls (PCBs), compared with their respective regulatory levels (Maximum Concentration of Contaminants for the Toxicity Characteristic, 40 CFR 261.24(b); and 40 CFR 761.61 for PCBs). A Summary of the maximum concentrations is included in Table 1.

Table 1 - Maximum Concentration of Contaminants for VSP Analysis

Contaminant	Regulatory Level
TCLP Arsenic	5.0 mg/L
TCLP Barium	100.0 mg/L
TCLP Cadmium	1.0 mg/L
TCLP Chromium	5.0 mg/L
TCLP Lead	5.0 mg/L
TCLP Mercury	0.2 mg/L
TCLP Selenium	1.0 mg/L
TCLP Silver	5.0 mg/L
TCLP PCBs	50 mg/kg

Simple Random Sampling. In random sampling, VSP places samples within a sample area in a random arrangement using a random number generator.

Number of Samples. Using a nonparametric model and the input parameters summarized in Table 2, VSP calculated a minimum of 18 samples required to reject the null hypotheses with 95 percent confidence and ensure that soil would not be mistakenly designated as non-hazardous if it is hazardous. The total number of samples was increased by 20%, as recommended by MARSSIM (EPA,2000), to account for missing or unusable data and uncertainty in the calculated value of n . Therefore, a total of 22 samples was chosen for the sample plan to ensure convergence of statistical confidence.

Sample Locations. The X and Y coordinates for each of the randomly located samples are included in the VSP sample design summary in Appendix A. The coordinates were set based on the scale of the Site Map (Figure 2) with the origin set at the southeast corner of the building. A field copy of the VSP output map is included as Figure 3. Each sample location will be located in the field to the nearest 1-foot using a measuring wheel and the relative proximity to nearby site features. If there is not a sufficient volume of material to collect a sample at a given sample location, the location will be adjusted in the field to the nearest area with sufficient dust to collect a sample.

Table 2 below shows the VSP Parameter Inputs.

Table 2: Visual Sample Plan Inputs

Parameter	Value	Basis
Primary Objective of the Sampling Design	Compare a site mean or median to a fixed threshold	Reject the null hypothesis.
Type of Sampling Design	Non-parametric	Spatial distribution of potential contamination is unknown, and previous sampling experience suggests that parametric assumptions of the data may not be accurate.
Sample Placement	Simple Random Sampling	Random sampling is a probability-based sample design that provides an unbiased distribution over the entire sampling area. Probability-based design also allows for statistical inferences to be made about the sample population, based on the data obtained from a limited number of samples.
Standard deviation (S)	0.8	Estimated based on an expected range of concentration of 5 mg/L, and dividing that range by 6 in accordance with guidance by EPA, 1989 and EPA, 2002.
Delta (Δ)	5	This is the width of the gray region. It is a user-defined value relative to a unit action level.
Alpha (α)	5%	This is the acceptable error of deciding a dirty site is clean when the true mean is equal to the Action Level. It is a maximum error rate since dirty sites with a true mean above the Action Level will be easier to detect. A value of 5% was

		chosen as a practical balance between health risks and sampling cost.
Beta (β)	5%	This is the acceptable error of deciding a clean site is dirty when the true mean is at the lower bound of the gray region.
MARSSIM sampling overage	20%	MARSSIM suggests that the number of samples should be increased by at least 20% to account for missing or unusable data and uncertainty in the calculated value of n.

Section 4: FIELD SAMPLING AND ANALYTICAL PROCEDURES

All field sampling activities will be conducted and supervised by experienced personnel with appropriate training to conduct the sampling and work at hazardous waste sites. The sampling procedures for each of the sampling areas are described below.

Following sample collection, all samples shall be immediately labeled with the sample ID, date and time of collection, and placed on ice. Samples will be delivered to the selected analytical laboratory following standard chain of custody protocols. A field log will also be kept describing field conditions, observations, and any deviations from the sampling plan. Following sample collection, the location of each of the samples will be marked on the ground using marking paint for future reference, and a photo of the location will be taken as part of the sampling record.

4.1 SAMPLING PROCEDURES SUMMARY

4.1.1 Central Accumulation Area, Tote Storage Area, and Baghouse Areas

Sample locations from the concrete floor of the CAA, Tote Storage Area, and Baghouse areas will be determined in the field by dividing each area into its respective sampling grids and selecting the target sampling locations as described in Section 3.1. Samples will be targeted from areas of staining, if present. Samples will be collected by using a roto-hammer concrete drill and drilling into the concrete surface approximately 3- to 4-inches and extracting the drill bit. The drill cuttings will then be scraped up onto a dedicated piece of cardstock and placed into laboratory supplied sampling containers. Multiple drill holes will likely be required to obtain sufficient sample volume, in which case the drill holes will be located in close proximity to each other.

Samples will be identified, at a minimum, with the name of the sample area (e.g. 'CAA' for Central Accumulation Area; 'BH' for Baghouse; 'TS' for Tote Storage, etc.), followed by a directional indicator to indicate which sampling quadrant the sample was obtained from (e.g., 'NW' for northwest, 'SE' for southeast, etc.). If a clear directional indicator cannot easily identify the quadrant the sample was obtained from, such as in the baghouse utility trench, the samples will be identified by a unique numerical identifier, and the location of the samples will be recorded in a field log book.

4.1.2 Subsurface Process Pits

All sampling activities from the subsurface process pits must follow Health and Safety guidelines and procedures described in the Site-Specific Health and Safety Plan (DH Environmental, 2020). The subsurface process pits are deep and are not protected with railings, and they present a unique health and safety risk to sampling personnel. In addition, the pits are considered confined spaces, and will be treated as a permit required confined space that requires fall protection, confined space rescue equipment, and monitoring of the air space for potential atmospheric hazards.

Samples will be collected of the slag-like material observed in the AOD Pit, the Arc Furnace Pit, and the Ingot Mold Pit. In addition, a white fibrous insulation-like material will also be sampled from the AOD pit. Samples of the slag-like material will be obtained using a rock hammer, pick ax, or other sampling utensils as determined based on the conditions in the field. Some of the material appears to be friable and may be relatively easy to remove from the concrete surfaces of the pit walls and floor. Other material may be more difficult to remove.

Once the samples of the slag-like material have been separated from the concrete, they will be placed into a dedicated 1-gallon plastic bag. The samples will then be reduced in size to the extent practical by hammering the plastic bag until enough material has been reduced to fragments to fill the sampling containers. The material needs to be reduced in size to less than approximately 0.5-inches in diameter. If the material cannot be reasonably reduced in the field, it will be submitted to the laboratory in sealed plastic bags for additional processing by the laboratory.

Samples will be identified with the name of the process pit followed by a numerical identifier, and the location of the samples will be recorded in a field log book.

4.1.3 Machine Shop Concrete Pile

A minimum of one six-point composite sample will be collected from the concrete debris pile located in the Machine Shop area. The sample will be collected using a shovel and digging a minimum of 12-inches into the stockpiled material. An equal portion of material will be composited together from six locations spaced equally around the stockpile. The material will then be homogenized, and fragments larger than approximately 0.5-inches in diameter will be manually removed. The homogenized sample will then be placed into laboratory supplied sampling containers.

4.1.4 Underground Storage Tanks

A minimum of one sample will be collected from each of the USTs containing more than 1-inch of liquids or solids. The USTs will be accessed by opening the entrance hatch of each tank. USTs containing liquids will be sampled by lowering a disposable polyethylene bailer through the column of liquid. USTs that have previously been closed in place and filled with sand will be sampled by retrieving the sand from the tank using a shovel. Following retrieval, the samples will be placed directly into laboratory supplied sampling containers.

Samples from the USTs will be identified by the UST number each sample was collected from. Samples of the sand material will also be identified with the term ‘-sand’ in the sample name.

4.1.5 Area Wide Sampling

The area-wide samples will be collected by directly scraping up dust and/or soil at each sample location using a shovel or hand shovel. If insufficient material is available at a sample location to fill the laboratory supplied sampling containers, the location will be adjusted in the field to the closest possible position with sufficient material to sample. The location of any samples that have been moved will be recorded in the field log book.

Some of the samples may fall within areas of the facility that have been previously covered with visqueen to prevent infiltration of stormwater through open holes in the roof. In this case, the visqueen will be temporarily pulled back to allow access to the underlying sample location. Once the sample has been collected, the visqueen will be pulled back and secured.

Samples will be identified by the prefix ‘AW’ for ‘area-wide’ and a numerical identifier as determined by VSP.

4.2 ANALYTICAL PROCEDURES

All samples will be analyzed for total RCRA 8 metals by EPA Methods 6010D (arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, silver, and zinc) and 7471B (mercury); TCLP RCRA 8 metals

by EPA methods 1311 (extraction), 6010D (all except mercury), and 7471B (mercury); PCBs by EPA method 8082; and VOCs by EPA Method 8260. The analytical methods, bottle type, preservations, and holding times are summarized in Table 3, including for the additional analytes described in Section 4.3.

Table 3: Containers, Preservatives, and Holding Times for Media Samples

Analysis	Matrix	EPA Analytical Method	Sample Container Size/Type	Preservation	Holding Time
Total metals	solids	- EPA 6010D (all except Hg) - EPA 7471 (Hg)	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	6 months (all except Hg) 28 days (Hg)
TCLP Metals	solids	- EPA 1311 (extraction) - EPA 6010/6020 (all except Hg) - EPA 7470 (Hg)	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	6 months
PCBs	solids	EPA 8082	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	none
VOCs	Solids	EPA 8260	(3) 40-ml VOAs, (2) with a stir bar, (1) without a stir bar	None. Store on ice $\leq 6^{\circ}\text{C}$	48-hours
Fish Bioassay	solids	Method 80-12	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	45 days
PAHs	Solids	EPA 8270	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	14-days to extract, 40-days to analyze
TPH-Gx	Solids	NWTPH-Gx	(3) 40-ml VOAs, (2) with a stir bar, (1) without a stir bar	None. Store on ice $\leq 6^{\circ}\text{C}$	48-hours
TPH-Dx	Solids	NWTPH-Dx	4-oz. clear wide mouth glass jar	None. Store on ice $\leq 6^{\circ}\text{C}$	14-days to extract, 40-days to analyze

Note: some samples may be able to be combined when analyzing for multiple compounds.

4.3 ADDITIONAL ANALYSIS

Additional compounds may also need to be analyzed to make a complete waste determination for the Site, following receipt of initial sampling results. This could include a fish bioassay test per *Biological Testing Method 80-12 for the Designation of Dangerous Waste* (Ecology, 2009). If an initial book designation results in an initial designation as WT-02, a fish bioassay test will be performed on that sample. If two or more samples result in an initial designation as WT-02, then a fish bioassay test will be performed on the two samples with the highest equivalent concentrations.

Polycyclic aromatic hydrocarbons (PAHs) are not considered a contaminant of concern in the waste streams described in this SAP. However, out of an abundance of caution, PAHs will be checked in selected waste designation samples for persistent criteria screening, and TCLP Semivolatile screening. A minimum of two samples will be analyzed for PAHs from the Area Wide sampling, and a minimum of one sample will be analyzed for PAHs from each of the Arc Furnace Pit and AOD Pit slag-like material, the CAA area, and both baghouse areas (Baghouse-North and Baghouse-South). The selection of

samples for PAH analysis will be made at random by personnel in the field. Samples submitted for analysis of PAHs will be analyzed by EPA Method 8270.

The presence or absence of petroleum hydrocarbons will not affect the waste designation determination because petroleum does not meet any of the toxicity criteria under WAC 173-303-100. However, samples collected from the CAA, TSA and Baghouse areas will be analyzed for hydrocarbons to evaluate the containment for clean closure requirements. Analysis for both gasoline- and diesel-range hydrocarbons will be by Method NWTPH-Gx and -Dx, respectively.

4.4 EQUIPMENT DECONTAMINATION PROCEDURES

All non-dedicated sampling equipment (trowels, sampling spoons, etc.) will be thoroughly decontaminated using a solution of anionic soap (e.g., Liquonox®) and deionized water followed by a “clean” rinse using deionized water. Samples will be collected using dedicated sampling equipment wherever possible to reduce the generation of investigation derived waste (IDW). All liquids generated during decontamination procedures will be containerized in Department of Transportation approved containers. The characterization and disposition of IDW is described in Section 4.10.

4.5 FIELD LOGBOOKS

Field logbooks and/or pre-printed field logs will be used to document where, when, how, and from whom any vital project information was obtained. Log entries will be complete and accurate enough to allow reconstruction of field activities. All entries will be legible, written in blue or black ink, and signed by the individual making the entries. Only factual and objective language should be used.

At a minimum, the following information will be recorded during the collection of each sample:

- Sample location and description
- Site or Sampling area sketch showing sample location and measured distances
- Sampler’s name(s)
- Date and Time of each sample collection
- Designation of sample as composite or grab
- Type of sample (e.g., soil, sediment, or water)
- Type of sampling equipment used to collect each sample
- Field instrument readings and calibrations
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, colors, etc.)
- Preliminary sample descriptions (e.g., for soils: clay loam, very wet; for water: clear water with strong ammonia-like odor)
- Sample preservations
- Sample identification numbers and any explanatory codes, and chain-of-custody form numbers
- Shipping arrangements (overnight air bill number)
- Name of recipient laboratories

In addition to the sampling information listed above, the following specific information will also be recorded in the field logbook for each day of sampling:

- Team members and their responsibilities

- Time of arrival/entry on site and time of site departure
- Other personnel on site
- Summary of any site meetings or discussions with contractors, agency personnel, site personnel, etc.
- Deviations from sampling plans, site safety plans, and QAPP procedures
- Changes in personnel and responsibilities with reasons for the changes
- Levels of safety protection

4.6 PHOTOGRAPHS

Photographs will be taken at all sampling locations and at other areas of interest on site. Photographs will serve to verify information entered in the field logbook, and/or to show sample areas, conditions, and individual samples. For each photograph taken, the following information will be written in the field logbook or recorded in a separate field photography log:

- Time, date, location, direction, and weather conditions
- Description of the subject photographed
- Name of person taking the photograph and name of person witnessing the photograph

4.7 LABELING

All samples collected will be labeled in a clear and precise way for proper identification in the field and for tracking in the laboratory. The samples will have preassigned, identifiable, and unique numbers. At a minimum, the sample labels will contain the following information:

- Station location
- Date of collection
- Analytical parameter(s)
- Method of preservation, if applicable

Every sample, including samples collected from a single location but going to separate laboratories, will be assigned a unique sample number.

4.8 CHAIN OF CUSTODY FORMS AND PROCEDURES

Chain-of-custody forms are used to document sample collection and shipment to laboratories for analysis. All sample shipments for analyses will be accompanied by a chain-of-custody form.

The chain-of-custody form will identify the contents of each shipment and maintain the custodial integrity of the samples. Generally, a sample is considered to be in someone's custody if it is either in someone's physical possession, in someone's view, locked up, or kept in a secured area that is restricted to authorized personnel. Until the samples are shipped or delivered to a Washington State accredited environmental laboratory, the custody of the samples will be the responsibility of DH Environmental personnel. The sampling team leader or designee will sign the chain-of-custody form in the "relinquished by" box and note date, time, and air bill number (if applicable).

The sample numbers for all rinsate samples, reference samples, laboratory QC samples, and duplicates will be documented on the chain-of-custody form. The original form is left with the laboratory analyzing the samples.

The shipping containers in which the samples are stored (e.g., usually an ice chest), will be sealed with self-adhesive custody seals any time the samples are not in someone's possession or view before shipping. All custody seals will be signed and dated.

4.9 PACKAGING

The packaging procedures that will be followed:

- When ice is used, it will be packed in double plastic bags.
- The bottom of the cooler will be lined with bubble wrap to prevent breakage.
- All sample bottles will be placed in plastic zip-lock bags or equivalent.

4.10 INVESTIGATION DERIVED WASTE

IDW generated during this investigation could include, but is not limited to, extra sample volume not retained for laboratory analysis, or decontamination liquids. All IDW will be placed in DOT approved containers and labeled with the container number, contents, date of accumulation, property owner, and contact information for the property owner or representative.

Section 5: REFERENCES

- DH Environmental, 2020. Site Specific Health and Safety Plan. Former Jorgensen Forge Facility, Tukwila, Washington.
- Ecology, 2004. Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Environmental Assessment Program, Publication #04-03-030.
- Ecology, 2005. *Guidance for Clean Closure of Dangerous Waste Units and Facilities*. Hazardous Waste and Toxics Reduction Program. Publication No. 94-111.
- Ecology, 2009. *Biological Testing Methods 80-12 For the Designation of Dangerous Waste*. Publication No. 80-12. June.
- Ecology, 2014. *Chemical Testing Methods for Designating Dangerous Waste*. Ecology Publication No. 97-407. December.
- EPA, 1989. Methods for Evaluating the Attainment of Cleanup Standards. Volume 1: Soils and Solid Media. EPA 230/02-89-042. NTIS PB89-234959. Statistical Policy Branch, Office of Policy, Planning, and Evaluation. Washington, DC.
- EPA, 1991. Risk Assessment Guidance for Superfund, Part A. Office of Solid Waste.
- EPA, 1991b. Management of Investigation-Derived Wastes During Site Inspections (9345.3-02). May.
- EPA, 1992. Guidance to Management of Investigation-Derived Wastes (9345.3-03FS). April.
- EPA, 1993. Data Quality Objectives for Superfund, Interim Final Guidance (540/G-93/017). September.
- EPA, 2000. Guidance for the Data Quality Objectives (EPA/600/R-96/055). August.
- EPA, 2000b. Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), report number EPA-402-R-97-016, Rev. 1.
- EPA, 2002. RCRA Waste Sampling Draft Technical Guidance; Planning, Implementation, and Assessment. EPA Publication EPA530-D-02-002. August.
- EPA, 2016. U.S. EPA, Science and Ecosystems Support Division, Waste Sampling Operating Procedure. EPA Publication SESDPROC-302-R3. December 16.
- EPA publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*



Vicinity Map



VICINITY MAP

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

06-19-2020

Figure

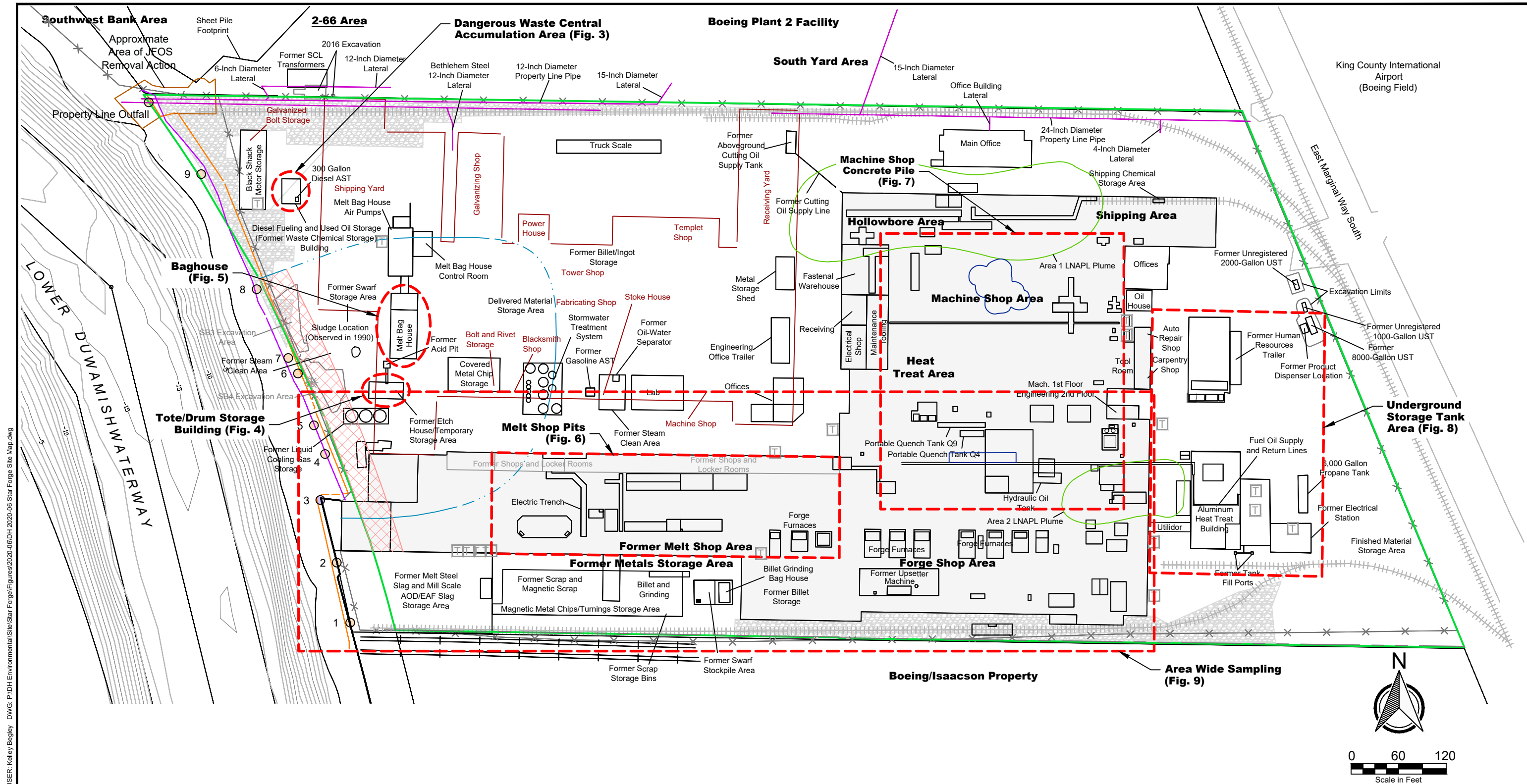
1

LEGEND

Site Location



Background Images Source: Google Earth Pro 5/26/2018





SITE MAP

Former Jorgensen Forge Facility 8531 E. Marginal Way S. Tukwila, WA, 98108	06-19-2020	Figure 2
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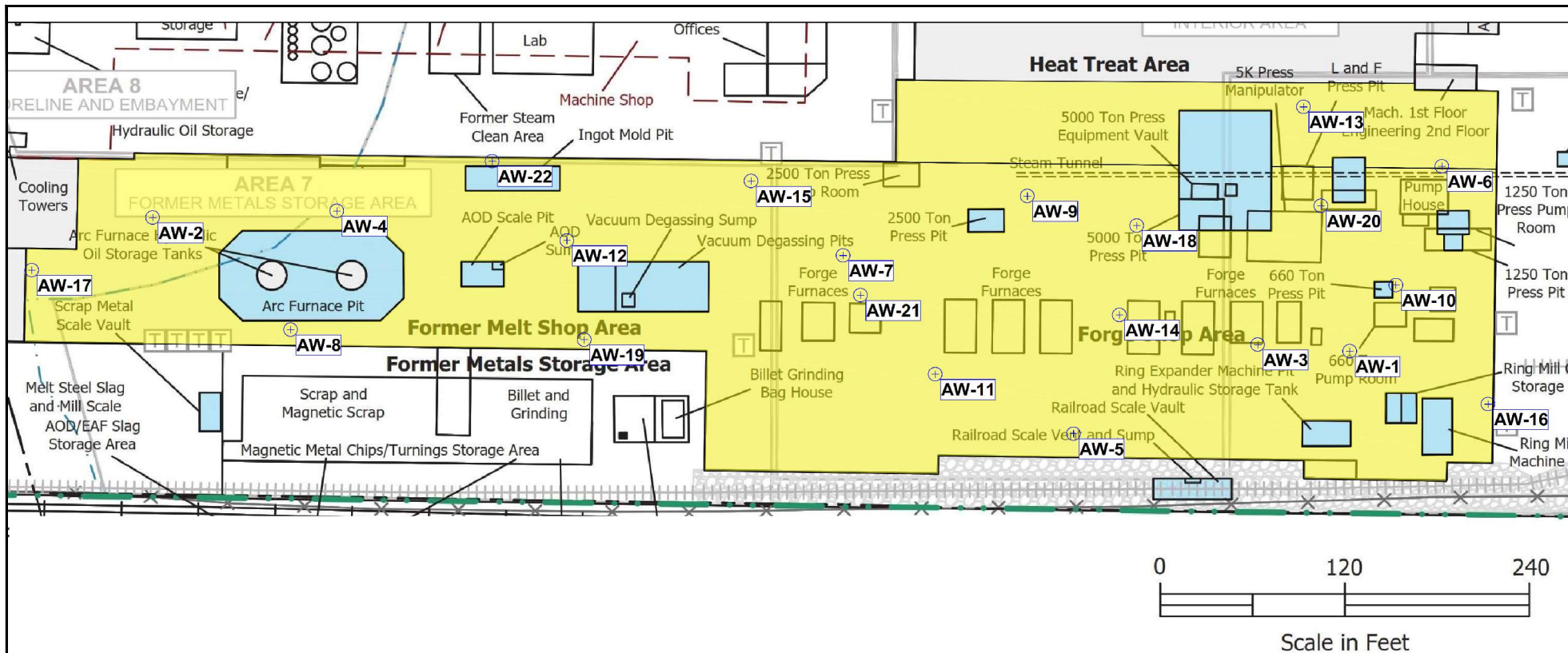
- Legend**

 - Approximate Property Boundary
 - Top of Shoreline Bank (2012)
 - Top of Shoreline Bank (2014)
 - Former Bethlehem Steel Facility
 - Former Embayment
 - Property Line Outfall Pipes
 - Estimated Extent of LNAPL on Groundwater (Farallon, August 2009)
 - Approximate Excavation Extents
 - Bulkhead Area
 - Outfall (Active)
 - Outfall (Inactive)
 - Railroad
 - Fence
 - Transformer
 - Below Ground Feature

Notes:

1. Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Achor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., Dated Jan 24, 2012.

2. Red text refers to features of the former Bethlehem Steel Facility.



Area Wide VSP Sampling Map

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

05-29-2020

Figure

3



Field Copy

Random sampling locations for comparing a median with a fixed threshold (nonparametric - MARSSIM)

Summary

This report summarizes the sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan.

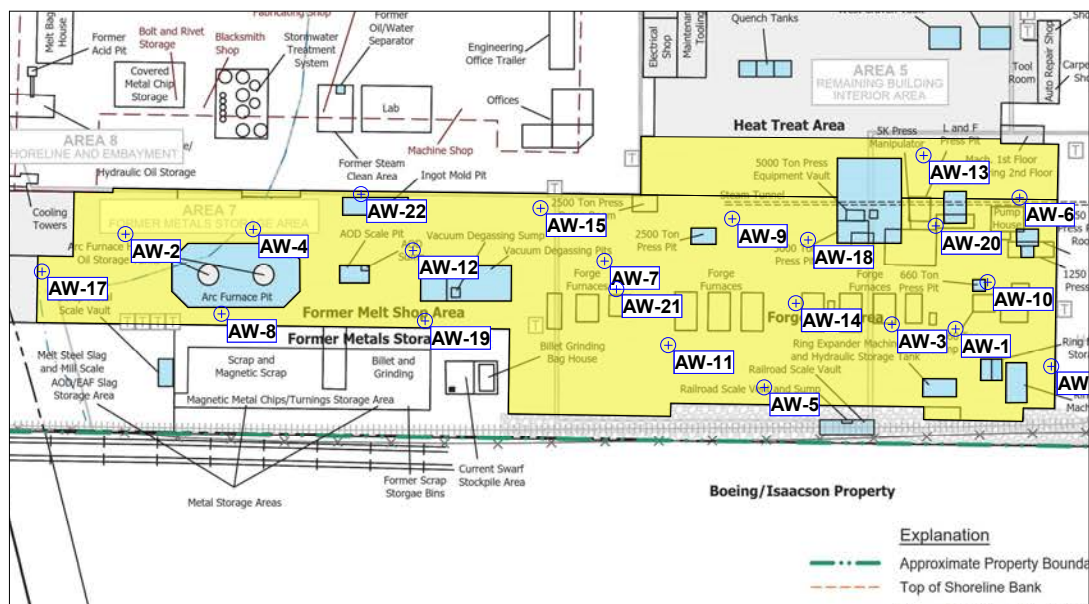
The following table summarizes the sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Compare a site mean or median to a fixed threshold
Type of Sampling Design	Nonparametric
Sample Placement (Location) in the Field	Simple random sampling
Working (Null) Hypothesis	The median(mean) value at the site exceeds the threshold
Formula for calculating number of sampling locations	Sign Test - MARSSIM version
Calculated number of samples	18
Number of samples adjusted for EMC	18
Number of samples with MARSSIM Overage	22
Number of samples on map ^a	22
Number of selected sample areas ^b	1
Specified sampling area ^c	159472.83 ft ²

^a This number may differ from the calculated number because of 1) grid edge effects, 2) adding judgment samples, or 3) selecting or unselecting sample areas.

^b The number of selected sample areas is the number of colored areas on the map of the site. These sample areas contain the locations where samples are collected.

^c The sampling area is the total surface area of the selected colored sample areas on the map of the site.



Area: melt/forge shops						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-92.8	74.8	AW-1		Random		
-871.4	163.8	AW-2		Random		
-152.7	79.2	AW-3		Random		
-751.6	168.2	AW-4		Random		
-272.5	19.8	AW-5		Random		
-32.9	197.9	AW-6		Random		
-422.2	138.5	AW-7		Random		
-781.6	89.1	AW-8		Random		
-302.5	178.1	AW-9		Random		
-62.9	118.7	AW-10		Random		
-362.3	59.4	AW-11		Random		
-601.9	148.4	AW-12		Random		
-122.8	237.4	AW-13		Random		
-242.6	99.0	AW-14		Random		
-482.1	188.0	AW-15		Random		
-3.0	39.6	AW-16		Random		
-950.0	128.6	AW-17		Random		
-231.3	158.3	AW-18		Random		
-590.7	82.5	AW-19		Random		
-111.5	171.5	AW-20		Random		
-411.0	112.1	AW-21		Random		
-650.6	201.2	AW-22		Random		

Primary Sampling Objective

The primary purpose of sampling at this site is to compare a site median or mean value with a fixed threshold. The working hypothesis (or 'null' hypothesis) is that the median(mean) value at the site is equal to or exceeds the threshold. The alternative hypothesis is that the median(mean) value is less than the threshold. VSP calculates the number of samples required to reject the null hypothesis in favor of the alternative one, given a selected sampling approach and inputs to the associated equation.

Selected Sampling Approach

A nonparametric random sampling approach was used to determine the number of samples and to specify sampling locations. A nonparametric formula was chosen because the conceptual model and historical information (e.g., historical data from this site or a very similar site) indicate that typical parametric assumptions may not be true.

Both parametric and non-parametric equations rely on assumptions about the population. Typically, however, non-parametric equations require fewer assumptions and allow for more uncertainty about the statistical distribution of values at the site. The trade-off is that if the parametric assumptions are valid, the required number of samples is usually less than if a non-parametric equation was used.

VSP offers many options to determine the locations at which measurements are made or samples are collected and subsequently measured. For this design, simple random point sampling was chosen. Locating the sample points randomly provides data that are separated by varying distances, providing good information about the spatial structure of the potential contamination. Knowledge of the spatial structure is useful for geostatistical analysis. However, it may not ensure that all portions of the site are equally represented.

Number of Total Samples: Calculation Equation and Inputs

The equation used to calculate the number of samples is based on a Sign test (see PNNL 13450 for discussion). For this

site, the null hypothesis is rejected in favor of the alternative one if the median(mean) is sufficiently smaller than the threshold. The number of samples to collect is calculated so that if the inputs to the equation are true, the calculated number of samples will cause the null hypothesis to be rejected.

The formula used to calculate the number of samples is:

$$n = \frac{(Z_{1-\alpha} + Z_{1-\beta})^2}{4(SignP - 0.5)^2}$$

where

$$SignP = \Phi\left(\frac{\Delta}{S_{total}}\right)$$

- $\Phi(z)$ is the cumulative standard normal distribution on $(-\infty,z)$ (see PNNL-13450 for details),
- n is the number of samples,
- S_{total} is the estimated standard deviation of the measured values including analytical error,
- Δ is the width of the gray region,
- α is the acceptable probability of incorrectly concluding the site median(mean) is less than the threshold,
- β is the acceptable probability of incorrectly concluding the site median(mean) exceeds the threshold,
- $Z_{1-\alpha}$ is the value of the standard normal distribution such that the proportion of the distribution less than $Z_{1-\alpha}$ is $1-\alpha$,
- $Z_{1-\beta}$ is the value of the standard normal distribution such that the proportion of the distribution less than $Z_{1-\beta}$ is $1-\beta$.

Note: MARSSIM suggests that the number of samples should be increased by at least 20% to account for missing or unusable data and uncertainty in the calculated value of n . VSP allows a user-supplied percent overage as discussed in MARSSIM (EPA 2000, p. 5-33).

For each nuclide in the table, the values of these inputs that result in the calculated number of sampling locations are:

Nuclide	n ^a	n ^b	n ^c	Parameter					
				S_{total}	Δ	α	β	$Z_{1-\alpha}$ ^d	$Z_{1-\beta}$ ^e
PCB	0	0	0		5	0.05	0.05	1.64485	1.64485
Arsenic	0	0	0						
Barium	0	0	0						
Cadmium	0	0	0						
Chromium	0	0	0						
Lead	18	18	22	0.8	1	0.05	0.05	1.64485	1.64485
Mercury	0	0	0						
Selenium	0	0	0						
Silver	0	0	0						

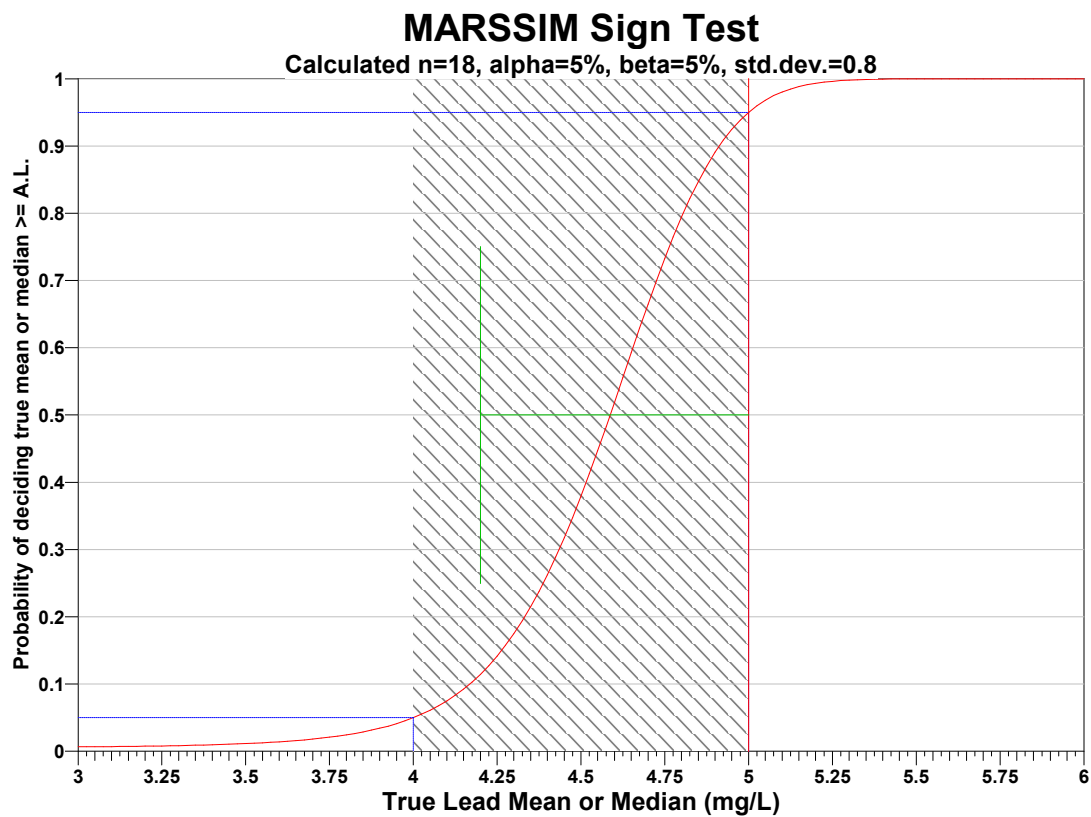
- ^a The number of samples calculated by the formula.
- ^b The number of samples increased by EMC calculations.
- ^c The final number of samples increased by the MARSSIM Overage of 20%.
- ^d This value is automatically calculated by VSP based upon the user defined value of α .
- ^e This value is automatically calculated by VSP based upon the user defined value of β .

Performance

The following figure is a performance goal diagram, described in EPA's QA/G-4 guidance (EPA, 2000). It shows the probability of concluding the sample area is dirty on the vertical axis versus a range of possible true median(mean) values for the site on the horizontal axis. This graph contains all of the inputs to the number of samples equation and pictorially represents the calculation.

The red vertical line is shown at the threshold (action limit) on the horizontal axis. The width of the gray shaded area is

equal to Δ ; the upper horizontal dashed blue line is positioned at $1-\alpha$ on the vertical axis; the lower horizontal dashed blue line is positioned at β on the vertical axis. The vertical green line is positioned at one standard deviation below the threshold. The shape of the red curve corresponds to the estimates of variability. The calculated number of samples results in the curve that passes through the lower bound of Δ at β and the upper bound of Δ at $1-\alpha$. If any of the inputs change, the number of samples that result in the correct curve changes.



Statistical Assumptions

The assumptions associated with the formulas for computing the number of samples are:

1. the computed sign test statistic is normally distributed,
2. the variance estimate, S^2 , is reasonable and representative of the population being sampled,
3. the population values are not spatially or temporally correlated, and
4. the sampling locations will be selected randomly.

The first three assumptions will be assessed in a post data collection analysis. The last assumption is valid because the sample locations were selected using a random process.

Sensitivity Analysis

The sensitivity of the calculation of number of samples was explored by varying the standard deviation, lower bound of gray region (% of action level), beta (%), probability of mistakenly concluding that $\mu >$ action level and alpha (%), probability of mistakenly concluding that $\mu <$ action level. The following table shows the results of this analysis.

Number of Samples							
AL=5		$\alpha=5$		$\alpha=10$		$\alpha=15$	
		s=1.6	s=0.8	s=1.6	s=0.8	s=1.6	s=0.8
LBGR=90	$\beta=5$	216	60	172	48	144	40
	$\beta=10$	172	48	132	36	108	30
	$\beta=15$	144	40	108	30	87	24
LBGR=80	$\beta=5$	60	22	48	17	40	15
	$\beta=10$	48	17	36	14	30	11

	$\beta=15$	40	15	30	11	24	9
	$\beta=5$	32	16	26	12	21	11
LBGR=70	$\beta=10$	26	12	20	10	16	9
	$\beta=15$	21	11	16	9	14	6

s = Standard Deviation

LBGR = Lower Bound of Gray Region (% of Action Level)

β = Beta (%), Probability of mistakenly concluding that $\mu >$ action level

α = Alpha (%), Probability of mistakenly concluding that $\mu <$ action level

AL = Action Level (Threshold)

Note: Values in table are not adjusted for EMC.

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This design was last modified 6/23/2020 6:30:27 PM.

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* - The report contents may have been modified or reformatted by end-user of software.

Site Health and Safety Plan

PROJECT INFORMATION

Site/Project Name	<i>Star Forge – Clean Closure</i>
Location	<i>8531 E Marginal Way S, Seattle, WA 98108</i>
Plan Prepared by	<i>Brian Johnson</i>
Project Manager	<i>Scott St John</i>
Project Engineer	<i>David Hill</i>
Site Safety Officer	<i>Brian Johnson / Tony Bahnick</i>
Client Contact/Phone	<i>Wayne Turk / Matteo Sanesi</i>
Start Date	<i>04/21/2020</i>
End Date	<i>TBD</i>
Key Project Personnel/Phone	<i>Wayne Turk, Star Forge – (206-255-8177)</i> <i>Matteo Sanesi, Star Forge – (253-878-6415)</i> <i>Scott St John, DH Environmental – Project Manager (206-327-0026)</i> <i>Nathan Moxley, DH Environmental – Task Leader (509-332-9281)</i> <i>David Hill, DH Environmental - Principal Engineer (206-293-3126)</i> <i>Tony Bahnick, DH Environmental – Project Supervisor (206-445-4556)</i> <i>Brian Johnson, DH Environmental – Safety Officer (206-930-4043)</i> <i>Jacob Briere, DH Environmental – Project Lead (425-591-8223)</i>
Site Team/Crew Size	<i>5-10</i>
Will Client, Agency or Other Personnel be On Onsite?	☒ Yes ☐ No
Work Hours	<i>Work will be performed during daylight hours.</i>
<u><i>Responsibilities of the Site Safety Officer</i></u> <i>The Project Site Safety Officer (SSO), who will be on site daily, shall:</i> ▪ <i>Implement this HASP and report any observed deviations from site conditions anticipated in the plan;</i> ▪ <i>Verify that on-site personnel and visitors are working in a manner consistent with applicable environmental and H&S regulations, site work plans and this project HASP, Advise the affected individual if a deviation is noted, and follow-up as appropriate;</i> ▪ <i>Verify that required personal protective, monitoring, and emergency equipment is used as required;</i> ▪ <i>Report observed accidents/incidents or inadequate work practices to the Contract Manager and Client;</i> ▪ <i>Report all accidents/incidents and findings regarding personnel exposure and work practices to the Contract Manager and Client;</i> ▪ <i>Conduct daily or pre-entry safety briefings</i>	



FACILITY DESCRIPTION AND BACKGROUND

Type of Facility	<i>Star Forge – Former Large-scale metal fabrication plant</i>
Buildings/Structures	<i>The site is approximately 21.6 acres and has a mixture of industrial use buildings as well as office buildings.</i> <i>18 UST's/AST's of various sizes are located on site.</i>
Access	<i>Field Vehicles</i>
General Geologic and Hydraulic Setting	<i>Property located on east bank of the Duwamish Waterway. The depth to groundwater varies across the site but is approximately 10-feet below grade. Groundwater and soil are known to be, or have the potential to be, impacted with petroleum, metals, and PCBs.</i>
Site History	<i>The Jorgensen Forge Site is approximately 21.6 acres, located in an industrial area along the east bank of the Lower Duwamish Waterway. The site is bordered to the north by the Boeing Plant 2 property, and to the south by the Boeing Isaacson property. It is bordered to the west by the Lower Duwamish Waterway, and to the east by East Marginal Way South and the King County Regional Airport.</i> <i>The property was used from 1942-1965 for fabrication of structural steel, tractor and road equipment. Operations at the site included forging and heat-treating by Isaacson Iron Works, which operated as a U.S. naval vessel manufacturer.</i> <i>The property was owned and operated by Earle M. Jorgensen Company from 1965 until 1992, when it was purchased by the plant management group and became the Jorgensen Forge Corporation. Jorgensen manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. They also processed nickel, titanium, and specialized alloys.</i>
Special Conditions/Comments	<i>Physical hazards such as vacant buildings, exposed pits, demolition debris, etc. are known to be present across the Site.</i>
Are Sources of Hazardous Substances Known to Have Been Stored/Spilled On Site?	☒ Yes ☐ No <u>Comments:</u>

PROJECT SCOPE OF WORK

SCOPE OF WORK

Mobilization / Site Preparation

- Mobilize all personnel, equipment, and materials as required to the site
- Inspect site prior to starting work to evaluate conditions
- Establish work perimeter via survey and staking of work area
- Establish work zones (exclusion, decontamination reduction, and support zones)
- Establish equipment, drum, and supplies management locations

Implement Monitoring and Control Measures

- Assure relevant and appropriate equipment (e.g. excavator, dump truck, air monitoring equipment, etc.) is on site and functioning prior to work activities.
- Test systems for operation and trouble shoot as necessary

Conduct Daily Safety Meeting and Periodic Safety Evaluations

- Assure all personnel are briefed on the day's tasks, known hazards, and hazard mitigation strategies.
- Encourage reporting unforeseen / unanticipated physical, equipment, and / or chemical hazards – issue STOP WORK AUTHORITY when necessary and review with all personnel – update Daily Toolbox Safety Meeting sheet

Site Orientation

- Prior to work assignment (layout, ingress; egress; emergency evacuation, phones)

Waste Characterization Sampling

- The number of samples and the location of the samples to be taken will vary throughout the facility
- Sampling in the "Metal Forge" area will require personnel to enter into trenches to collect samples of metal slag and concrete chippings. The pits that require entry vary in depth with a maximum depth of 18'. These trenches will be entered as permit required confined spaces, see attached confined space permit
- A 28' extension ladder will be used to access the trenches in the "Metal Forge" area. Personnel traveling the ladder for access or egress to the trenches will be utilizing fall protection, and will be secured to a 5,000lb anchor point
- Samples that will be collected in the "Metal Forge" will require using a roto-hammer/drill. Concrete chippings and metal slag will be collected from each location and placed directly into laboratory supplied sampling containers
- Samples that will be collected throughout the rest of the facility will be collected from each location and placed directly into laboratory supplied sampling containers

SCOPE OF WORK

Transportation and Disposal

- Assure proper waste characterization (waste profiling), acceptance by the proposed receiving facility, and transportation documentation prior to off site management (for each waste stream).
- Assure transport vehicles loaded with waste are within the legal weight limit.

Decontamination – Personnel

- All personnel will proceed through decontamination (dry and wet methods may be used) and exit through an established Contamination Reduction Zone.
- An emergency eye wash & sanitation stations that will have soap and water will be available onsite.
- Containerize wash water and other materials generated during decontamination into DOT shippable containers.
- Characterize waste generated from personnel decontamination.
- Properly dispose of waste following State and Federal regulations.

Equipment Decontamination

- Decontaminate all equipment prior to leaving the site.
- Complete decontamination in controlled areas, ensure all waste generated is controlled and contained on site.
- Containerize wash water and other materials generated during decontamination into DOT shippable containers.
- Characterize waste generated from equipment decontamination.
- Properly dispose of waste following State and Federal regulations.

Demobilize Equipment

- De-Mobilize all personnel, equipment, materials and washing facilities from the site.
- Inspect site prior to conclusion of work to evaluate conditions and ensure client concurs with completion of the project.

CHEMICALS OF CONCERN

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Barium Sulfate 7727-43-7	- Flash Point: NA - Odor: Odorless - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 10 mg/m ³ IDLH: N.D.	- Inhalation - Ingestion - Skin contact - Absorption	Irritates eyes, nose, upper respiratory system; benign pneumoconiosis (baritosis).
Mercury 7439-97-6	- Flash Point: NA - Odor: Odorless liquid - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 0.05 mg/m ³ IDLH: 10 mg/m ³	- Inhalation - Ingestion - Skin absorption - Skin and/or eye contact	Irritates eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria.
Selenium 7782-49-2	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 0.2 mg/m ³ IDLH: 1 mg/m ³	- Inhalation - Ingestion - Skin and/or eye contact	Irritates eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; In Animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage
Silver 7440-22-4	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL-TWA: 0.01 mg/m ³ IDLH: 10 mg/m ³	- Inhalation - Ingestion - Skin and/or eye contact	Blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance.

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Copper 7440-50-8	- Vapor Density: NA (Air =1) - Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 1 mg/m ³ IDLH: 100 mg/m ³	- Inhalation - Ingestion - Skin and/or eye contact	Irritates eyes, nose, pharynx; nasal septum perforation; metallic taste; dermatitis; In Animals: lung, liver, kidney damage; anemia.
Nickel 7440-02-0	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 0.015 mg/m ³ IDLH: Ca 1 mg/m ³	- Inhalation - Ingestion - Skin and/or eye contact	Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen].
Zinc 1314-13-2	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA - Vapor Density: NA (Air =1)	PEL-TWA: 5 mg/m ³ IDLH: 500 mg/m ³	Inhalation	Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function.
Arsenic 7440-38-2	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.010 mg/m ³ REL: C 0.002 mg/m ³ IDLH: Ca (5 mg/m ³)	- Inhalation - Ingestion - Skin contact - Absorption	Ulceration of nasal septum, GI disturbances, respirator irritation, peripheral neuropathy, dermatitis, hyperpigmentation of skin.
Cadmium 7440-43-9	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.005 mg/m ³ REL: Ca	- Inhalation - Ingestion	Pulmonary edema, breathing difficulty, cough, chest tightness, substernal pain,

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
		IDLH: Ca (9 mg/m ³)		headache, chills, muscle aches, nausea, vomiting, diarrhea, loss of sense of smell, emphysema, proteinuria, mild anemia.
Chromium 7440-47-3	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.5 mg/m ³ REL: 0.5 mg/m ³ IDLH: 250 mg/m ³	- Inhalation - Ingestion - Skin contact	Irritation eyes, skin; lung fibrosis (histologic).
Lead 7439-92-1	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.050 mg/m ³ REL (8-hour): 0.050 mg/m ³ IDLH: 100 mg/m ³	- Inhalation - Ingestion - Skin contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension.
Poly Chlorinated Biphenyl 53469-21-9	- Flash Point: NA - Odor: Mild hydrocarbon odor - LEL = NA - UEL = NA	PEL: 1 mg/m ³ (skin) TWA: 0.001 mg/m ³ IDLH: Ca (5 mg/m ³)	- Inhalation - Ingestion - Skin contact - Absorption	Irritates eyes, chloracne, liver damage, reproductive effects.

PERSONNEL PROTECTIVE EQUIPMENT BY TASK

TASK	Level	MASK /CARTRIDGE /AIR	ADDITIONAL PPE
Establish support area / prepare	D	N/A	Hardhats, safety glasses, gloves, steel toe boots, high visible traffic vests.
Waste designation sampling	C/D	GME P-100 Cartridge	Hardhats, safety glasses, gloves, steel toe boots, high visible traffic vests, respirator if needed, and fall protection as needed.
Decontaminate equipment	C/D	GME P-100 Cartridge	Hardhats, polycoated tyvek suit, nitrile inner gloves, neoprene outer gloves, leather gloves as appropriate, PVC or boot covered steel toe boots.
Mobilize Equipment to area / establish management waste systems or locations	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, leather gloves (as needed), steel toe boots
Conduct daily safety meeting (before shift & after shift)	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek, hi-visibility safety vest, steel toe boots (each as appropriate)
Site Preparation / site security / site postings and notifications	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, leather gloves (as needed), steel toe boots
Inspect appropriate equipment each day / monitor perimeter	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, leather gloves (as needed), steel toe boots
Install erosion control measures	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, leather gloves (as needed), steel toe boots
Disposal and transportation	C/D	Full / Face P100/ OVA	Hardhats, polycoated tyvek suit, nitrile inner gloves, neoprene outer gloves, leather gloves as appropriate, PVC or boot covered steel toe boots
Site reclamation	D	N/A	Hardhats, safety glasses, white tyvek coveralls, hi-visibility safety vest, nitrile inner gloves, leather gloves (as needed), steel toe boots
De-mobilize	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, leather gloves (as needed), steel toe boots



SAFETY EQUIPMENT AND PROCEDURES

Initial Level of Protection	<i>Based off our evaluation of the work site, and the tasks that are to be completed, we have determined Level D PPE to be adequate.</i> <i>If nuisance dust becomes a factor during sampling, then Level C PPE will be donned.</i>
Training Requirements for Site Workers	<i>HAZWOPER 40, Current 8 Hour Refresher, First Aid /CPR, HAZWOPER Supervisor</i>
Decontamination Procedures	<i>Boots and hands will be decontaminated with soap and water as necessary.</i>
Health and Safety Equipment Checklist	
☒ <i>Respirator with Cartridges</i>	
☒ <i>Protective Clothing (coveralls, FRCs)</i>	
☒ <i>Chemical Protective Gloves</i>	
☒ <i>Decontamination equipment</i>	
☒ <i>Steel-toed Boots</i>	
☒ <i>Disposable Boot Covers</i>	
☒ <i>Safety Glasses — use when appropriate</i>	
☒ <i>Hard Hat</i>	
☒ <i>Caution Tape, Traffic Cones, or Barriers</i>	
☒ <i>Emergency Eye Wash Bottles</i>	
☒ <i>Fall Protection Harness</i>	
☒ <i>First Aid Kit: located in field Vehicle</i>	
☒ <i>Fire Extinguisher — located in field vehicle (2 per truck)</i>	
☒ <i>Drinking Water</i>	
☒ <i>Rain Gear</i>	
☒ <i>High Visibility Vest</i>	

☒ Cell Phone
☒ Radios
☒ Tychem Coveralls

HAZARD EVALUATION

ITEM	HAZARD	PREVENTION
Ambient weather / PPE load	Heat stress Dehydration	• Must follow WAC 296-62-095 regulation for heat illness prevention • Implement heat stress plan for personnel for any of the following temperature ○ 52° - Nonbreathing clothes including vapor barrier clothing or PPE such as chemical resistant suits ○ 77° - Double-layer woven clothes including coveralls, jackets and sweatshirts ○ 89° - All other clothing • Provide shaded rest area for personnel • Shall provide one quart of water per employee per hour for drinking for the entire shift • Supervisor to track site temperature conditions to monitor for weather
Mobilization to site	Site Security Slips, Trips, Falls Traffic Overhead Hazards	• Clear & Mark off drop off area with barrier tape (if required) • Visual barriers will be in place during work hours, and when site is unattended. • Limit all walking and access to designated paths / destinations
Air monitoring	Inhalation Over exposure	• Ensure current calibration of equipment • Fresh air calibration • Monitor work zone area • Monitor work area perimeter
General work area	Slip / trip / fall	• Designated pathways • Maintain pathways cleared of debris • Enforce good construction housekeeping
General work area – lifting	Lifting	• Plan and stage to minimize long distance carrying • Split heavy loads into smaller loads • Use mechanical lifting aids (i.e. forklift or excavator bucket) where possible and can be done safely • Use assistant for heavy (>30 lbs.) or awkward load • Use proper lifting techniques with good footing

ITEM	HAZARD	PREVENTION
General work area – traffic	Struck by	- Set up visible barricades on access roads; - Wear high visibility safety vests (except in exclusion zone)
Traffic	Struck by	- Set up visible barricades - Wear high visibility safety vests - Only authorized personnel in work zones
Break time	Ingestion	Thoroughly wash hands before eating, drinking, smoking
Delivery of site equipment & supplies	Back Strains, Hand Injuries	- Verify before lifting that all hoses are bundled and secured in roll. - Do not throw equipment from truck, - Lift any object over 30lbs with assistance. If in doubt of the weight ask for HELP first. - Lift properly with legs and maintain footing.
Loading, moving, and transportation activities (on-site)	Struck by Noise	- PPE on page 5 - Hearing protection - Back up alarms or rotating beacons - Keep unauthorized personnel out of operating areas - Train personnel on working safely around equipment - Wear Reflective Vests - Make eye to eye contact between operator/driver; - Signal or communicate movements - Equipment operator controls movement of personnel in and out of swing zone or equipment travel area - Stay clear of swing zone of equipment
Use of hand tools	Pinch points Strain-sprain Difficult- positions Cut-hazards	- Use proper holding and supporting techniques when turning wrenches, screw-drivers, and other torque-enhancing tools - Ensure proper direction and grip on plumbing fixtures prior to use of full body weight for counterbalance – use proper footing stance - Verify correct pipelines prior to disassembly
Confined space entry	Illness Death	See attached confined space permit
Falling	Bodily injury Death	- Fall protection will be used while accessing and egressing the trenches. - A 50' self will be secured to an anchor point of at least 5,000lbs. - Only authorized personnel will be allowed in fenced areas where fall hazards exist.

ITEM	HAZARD	PREVENTION
Excavation, loading, Compacting, and transportation activities	Struck by Noise Metals Falls	• PPE on page 5 • Personnel will remain 4' or more from excavation leading edge. • Hearing protection • Back up alarms or rotating beacons • Keep unauthorized personnel out of operating areas • Train personnel on working safely around equipment • Wear Reflective Vests • Make eye to eye contact between operator/driver; signal or communicate movements • Equipment operator controls movement of personnel in and out of swing zone or equipment travel area • Stay clear of swing zone of equipment
Heavy Machinery	Equipment failure Slips, trips, falls Overhead hazards Not in use	• Conduct pre-operation inspection of all parts including connections. • Ensure grease and spare parts are available in case of failure • Inspect fire extinguishers on equipment • Never operate machinery outside of manufacturer's specifications • Never alter equipment • Board machinery use handrails & maintain three contact points at all times. • Ensure surfaces and boots are dry and free form debris • Power lines and other structures on site may interfere with operation of equipment. Where these hazards cannot be removed or controlled, the operator will only proceed with approval and direction from the Safety Officer. • When equipment is not in use, ensure parking brake is set & equipment is staged on level ground, not blocking entry /exit paths.
Dust Mitigation (if required)	Dust levels visible	• Water will be sprayed periodically over exposed work area
Debris Removal /Material Handling	Struck by Overhead Skin irritation	• Establish visual contact with operator prior to any movement of excavator bucket • Ground personnel to wear high visibility vest • Avoid skin contact with poison ivy /oak



ACCIDENT/EXPOSURE PROCEDURES

TYPE CONTACT	FIRST AID
Eyes	• Flush each eyes continuously for 15 minutes • Tilt head to side to ensure liquid runs onto floor not in the other eye • Refer to EMT for evaluation
Skin	• Remove contaminated clothing immediately • Wash skin continuously for 15 minutes • Refer to physician if redness, swelling, or pain persists after washing
Not Breathing	• Call 911 • Remove to fresh air immediately if respiratory distress develops; • Begin CPR until EMT arrives
Ingestion	• Aspiration hazard • Do not induce vomiting • Do not give anything by mouth
Emergency Contact Information	City of Seattle - • Fire/Ambulance: (911) • Police: (911) • Hospital: Swedish Cherry Hill (206-320-2000)
Accident Reporting	• Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer • Project Manager / Safety Officer will relay information to Contract Manager • Determination will be made regarding need for post-accident drug testing • Notify Client immediately in the event of any incident



EMERGENCY RESOURCES AND PROCEDURES

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
NEAREST HOSPITAL	Hospital: Swedish Cherry Hill Campus 500 17 th Ave, Seattle, WA 98122 (See Figure 2 for directions) 206-320-2000
NEAREST PHONE	Supervisor cell phone
FIRST AID KIT	DH Environmental pickup truck
FIRE EXTINGUISHER	DH Environmental pickup truck
EYEWASH STATION AND EMERGENCY SHOWER	Locate facility emergency eyewash during H&S meeting
EVACUATION ROUTE / MEETING POINT	Determine after arrival at site Draw on site map Discuss with crew before start of project
SPILL CONTAINMENT	Work involving liquids shall be performed to the extent possible on sheet plastic and or secondary containment. In the event of a spill, absorbent shall be applied and the absorbed waste shall be immediately transferred to container.



SIGNATURE PAGE

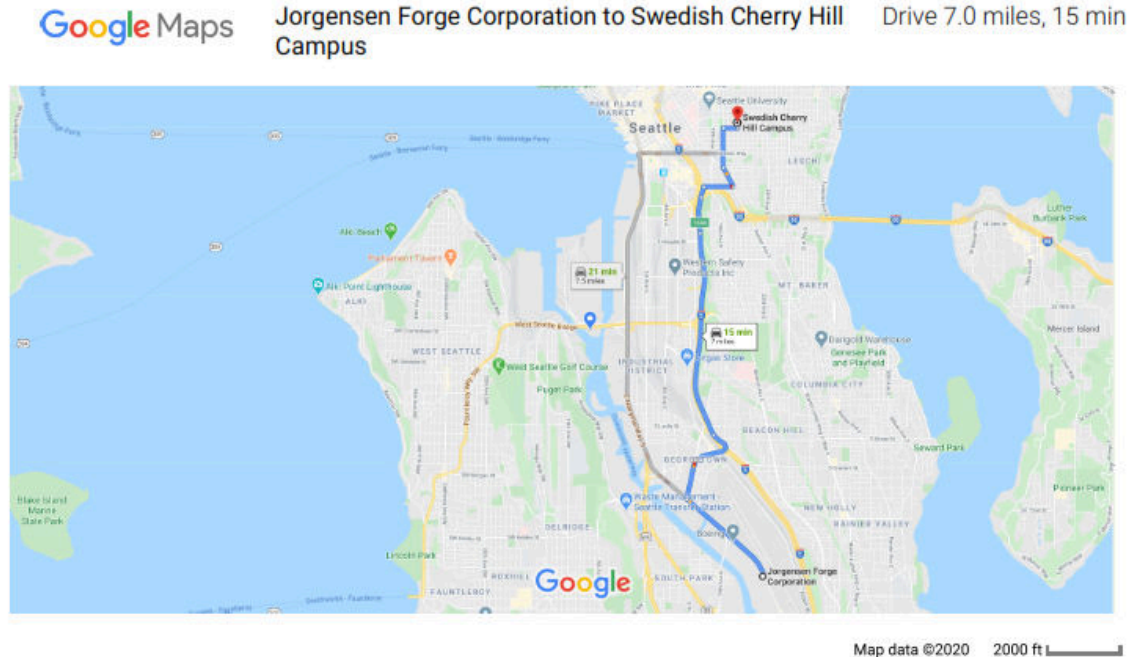
I have read and understand the attached Site Health and Safety Plan and the DH Environmental, Inc. health and safety policies and agree to comply with the requirements described within.

Date	Print Name	Signature

Figure 1: Map and Directions to Swedish Cherry Hill Campus

4/17/2020

Jorgensen Forge Corporation to Swedish Cherry Hill Campus - Google Maps



Jorgensen Forge Corporation

8531 E Marginal Way S, Tukwila, WA 98108

Take E Marginal Way S and I-5 N to 14th Ave S in Seattle

- 13 min (6.2 mi)
 1. Head northwest on E Marginal Way S
 - 1.3 mi
 2. Turn right onto Corson Ave S
 - 0.5 mi
 3. Turn right onto S Bailey St
 - 335 ft
 4. Use the left 2 lanes to turn left onto the Interstate 5 N ramp
 - 0.6 mi
 5. Merge onto I-5 N
 - 2.5 mi
 6. Use the 2nd from the right lane to take exit 164A for Dearborn St toward James St/Madison St
 - 0.4 mi
 7. Keep right, follow signs for Dearborn Street
 - 0.1 mi
 8. Turn right onto S Dearborn St
 - 0.4 mi

1011 SW Klickitat Way, Suite 107
Seattle, WA 98134



4/17/2020

Jorgensen Forge Corporation to Swedish Cherry Hill Campus - Google Maps

- ↩ 9. Turn left onto Rainier Ave S
 Pass by Raineer Oven Corp. (on the right in 0.2 mi)
_____ 0.3 mi

Continue on 14th Ave S. Drive to 17th Ave

- _____ 3 min (0.7 mi)
- ↗ 10. Turn right before Rainier Center
_____ 0.5 mi
- ↗ 11. Turn right onto E Jefferson St
_____ 0.2 mi
- ↩ 12. Turn left at the 3rd cross street onto 17th Ave
_____ 308 ft

Swedish Cherry Hill Campus

500 17th Ave, Seattle, WA 98122

1011 SW Klickitat Way, Suite 107
Seattle, WA 98134



Site Health and Safety Plan

PROJECT INFORMATION

Site/Project Name	Star Forge UST Sampling and Tank Decommission
Location	8531 E Marginal Way S, Seattle, WA 98108
Plan Prepared by	Brian Johnson
Project Manager	Scott St John
Project Engineer	David Hill
Site Safety Officer	Brian Johnson / Tony Bahnick
Client Contact/Phone	Wayne Turk / Matteo Sanesi
Start Date	04/21/2020
End Date	TBD
Key Project Personnel/Phone	Wayne Turk, Star Forge – (206-255-8177) Matteo Sanesi, Star Forge – (253-878-6415) Scott St John, DH Environmental – Project Manager (206-327-0026) Nathan Moxley, DH Environmental – Task Leader (509-332-9281) David Hill, DH Environmental - Principal Engineer (206-293-3126) Tony Bahnick, DH Environmental – Project Supervisor (206-445-4556) Brian Johnson, DH Environmental – Safety Officer (206-930-4043) Jacob Briere, DH Environmental – Project Lead (425-591-8223)
Site Team/Crew Size	5-10
Will Client, Agency or Other Personnel be On Onsite?	☒ Yes ☐ No
Work Hours	Work will be performed during daylight hours.

Responsibilities of the Site Safety Officer

The Project Site Safety Officer (SSO), who will be on site daily, shall:

- Implement this HASP and report any observed deviations from site conditions anticipated in the plan;
- Verify that on-site personnel and visitors are working in a manner consistent with applicable environmental and H&S regulations, site work plans and this project HASP, Advise the affected individual if a deviation is noted, and follow-up as appropriate;
- Verify that required personal protective, monitoring, and emergency equipment is used as required;
- Report observed accidents/incidents or inadequate work practices to the Contract Manager and Client;
- Report all accidents/incidents and findings regarding personnel exposure and work practices to the Contract Manager and Client;
- Conduct daily or pre-entry safety briefings



FACILITY DESCRIPTION AND BACKGROUND

Type of Facility	<i>Star Forge – Former Large-scale metal fabrication plant</i>
Buildings/Structures	<i>The site is approximately 21.6 acres and has a mixture if industrial use buildings as well as office buildings.</i> <i>18 UST's/AST's of various sizes are located on site.</i>
Access	<i>Field Vehicles</i>
General Geologic and Hydraulic Setting	<i>Property located on east bank of the Duwamish Waterway. The depth to groundwater varies across the site but is approximately 10-feet below grade. Groundwater and soil are known to be, or have the potential to be, impacted with petroleum, metals, and PCBs.</i>
Site History	<i>The Jorgensen Forge Site is approximately 21.6 acres, located in an industrial area along the east bank of the Lower Duwamish Waterway. The site is bordered to the north by the Boeing Plant 2 property, and to the south by the Boeing Isaacson property. It is bordered to the west by the Lower Duwamish Waterway, and to the east by East Marginal Way South and the King County Regional Airport.</i> <i>The property was used from 1942-1965 for fabrication of structural steel, tractor and road equipment. Operations at the site included forging and heat-treating by Isaacson Iron Works, which operated as a U.S. naval vessel manufacturer.</i> <i>The property was owned and operated by Earle M. Jorgensen Company from 1965 until 1992, when it was purchased by the plant management group and became the Jorgensen Forge Corporation. Jorgensen manufactured specialized large-scale metal parts for the aircraft and marine industries, including open die steel forgings and rolled aluminum rings. They also processed nickel, titanium, and specialized alloys.</i>
Special Conditions/Comments	<i>Physical hazards such as vacant buildings, exposed pits, demolition debris, etc. are known to be present across the Site.</i>
Are Sources of Hazardous Substances Known to Have Been Stored/Spilled On Site?	☒ Yes ☐ No <u>Comments:</u>

PROJECT SCOPE OF WORK

SCOPE OF WORK

Mobilization / Site Preparation

- Mobilize all personnel, equipment, and materials as required to the site
- Inspect site prior to starting work to evaluate conditions
- Establish work perimeter via survey and staking of work area
- Establish work zones (exclusion, decontamination reduction, and support zones)
- Establish equipment, drum, and supplies management locations

Implement Monitoring and Control Measures

- Assure relevant and appropriate equipment (e.g. excavator, dump truck, air monitoring equipment, etc.) is on site and functioning prior to work activities.
- Test systems for operation and trouble shoot as necessary.

Conduct Daily Safety Meeting and Periodic Safety Evaluations

- Assure all personnel are briefed on the day's tasks, known hazards, and hazard mitigation strategies.
- Encourage reporting unforeseen / unanticipated physical, equipment, and / or chemical hazards – issue STOP WORK AUTHORITY when necessary and review with all personnel – update Daily Toolbox Safety Meeting sheet.

Site Orientation

- Prior to work assignment (layout, ingress; egress; emergency evacuation, phones)

Lockout

- DH Environmental and Facilities manager will ensure lock out / tagout /block /bleed of all energized systems that are part of the project scope of work

Tank Set-Up

- Calibrate 4-gas/PID monitor prior to the start of the project
- Conduct air monitoring with 4-gas/PID monitor

Tank Sampling

- Sample the contents of 18 UST's/AST's
- Prepare and deliver samples to an accredited lab for analysis
- Sample slag material that has been used as surface covering and fill around the UST's
- Create waste designation packages for the contents of the tanks using lab data

Tank Decommission and Disposal

SCOPE OF WORK

- Remove fuel from USTs with vacuum truck, personnel with vacuum lines will remain outside USTs
- Triple rinse UST, collect rinsate/sludge and transport for disposal
- Disconnect and cap all remaining piping connections to each UST
- Inert all USTs with compressed Carbon Dioxide or Nitrogen (conducted by Marine Chemist)
- Document tank atmosphere readings and inert conditions
- All collected waste will be disposed of offsite at a properly permitted disposal facility

Soil Excavation

- Remove slag that has been used as fill around the tanks
- Limited excavation of contaminated soil
- Field screening methods will be utilized to verify that impacted soil has been removed

Soil Transportation and Disposal

- Assure proper waste characterization (waste profiling), acceptance by the proposed receiving facility, and transportation documentation prior to off site management
- Load excavated soil into dump trucks
- Assure transport vehicles loaded with waste are within the legal weight limit
- Assure transport vehicles are equipped with the correct DOT paperwork for the waste material they are hauling

Decontamination and Demobilization

- Decontaminate all personnel and equipment
- Demobilize from facility
- Provide re-certification of inert tank status at a later date using Marine Chemist

CHEMICALS OF CONCERN

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Diesel Fuel 68476-34-6	- Flash Point: >100.0 °F - Odor: Oily liquid with a strong characteristic odor - LEL = 0.4% - UEL = 8% - Vapor Density: 3 (Air =1)	PEL-TWA: 100 mg/m3 IDLH: N.D.	- Inhalation - Ingestion - Skin contact - Absorption	Irritation of nose and throat, irritation of eyes and mucous membranes, skin irritation, unconsciousness, corneal damage, narcosis, decrease in motor functions, behavioral changes, edema, liver enlargement, jaundice, conjunctivitis, proteinuria, defatting of the skin, rash.
Bunker Fuel	- Flash Point: >141.8 °F - Odor: Petroleum - LEL = 0.9% - UEL = 8% - Vapor Density: >5 (Air =1)	- Clarified oils: PEL 5 mg/m3 - Fuel Oil No. 6 PEL: 5 mg/m3 - Fuel Oil PEL: 5 mg/m3 - Naphthalene PEL: 50 mg/m3 IDLH: N.D.	- Inhalation - Ingestion - Skin contact - Absorption	Irritation of nose and throat, irritation of eyes and mucous membranes, skin irritation, unconsciousness, corneal damage, narcosis, decrease in motor functions, behavioral changes, edema, liver enlargement, jaundice, conjunctivitis, proteinuria, defatting of the skin, rash.
Poly Chlorinated Biphenyl 53469-21-9	- Flash Point: NA - Odor: Mild hydrocarbon odor - LEL = NA - UEL = NA	PEL: 1 mg/m3 (skin) TWA: 0.001 mg/m3 IDLH: Ca (5 mg/m3)	- Inhalation - Ingestion - Skin contact - Absorption	Irritates eyes, chloracne, liver damage, reproductive effects.

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Arsenic 7440-38-2	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.010 mg/m ³ REL: C 0.002 mg/m ³ IDLH: Ca (5 mg/m ³)	- Inhalation - Ingestion - Skin contact - Absorption	Ulceration of nasal septum, GI disturbances, respirator irritation, peripheral neuropathy, dermatitis, hyperpigmentation of skin.
Cadmium 7440-43-9	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.005 mg/m ³ REL: Ca IDLH: Ca (9 mg/m ³)	- Inhalation - Ingestion	Pulmonary edema, breathing difficulty, cough, chest tightness, substernal pain, headache, chills, muscle aches, nausea, vomiting, diarrhea, loss of sense of smell, emphysema, proteinuria, mild anemia.
Chromium 7440-47-3	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.5 mg/m ³ REL: 0.5 mg/m ³ IDLH: 250 mg/m ³	- Inhalation - Ingestion - Skin contact	Irritation eyes, skin; lung fibrosis (histologic).
Lead 7439-92-1	- Flash Point: NA - Odor: Odorless solid - LEL = NA - UEL = NA	PEL/TWA: 0.050 mg/m ³ REL (8-hour): 0.050 mg/m ³ IDLH: 100 mg/m ³	- Inhalation - Ingestion - Skin contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension.

PERSONNEL PROTECTIVE EQUIPMENT BY TASK

TASK	Level	MASK /CARTRIDGE /AIR	ADDITIONAL PPE
Establish support area / prepare	D	N/A	Hardhats, safety glasses, Nomex coveralls, leather gloves, steel toe boots, high visible traffic vests.
Sample contents of tanks	D	N/A	Hardhats, safety glasses, Nomex coveralls, leather gloves, steel toe boots, high visible traffic vests.
Establish support area / prepare	D	N/A	Hardhats, safety glasses, Nomex coveralls, leather gloves, steel toe boots, high visible traffic vests.
Purge fuel from dispensers and lines into USTs	C	GME P-100 Cartridge	Hardhat, FR Coveralls, Nitrile inner and outer gloves, steel toe boots or boot covers.
Drain Tank with vacuum truck (No CSE)	C/D	GME P-100 Cartridge	Hardhat, FR Coveralls, Nitrile inner and outer gloves, steel toe boots or boot covers.
Operator – Vac truck	D	N/A	Hardhats, safety glasses, hearing protection, coveralls, canvas/leather outer gloves, leather steel toe boots, high visible traffic vests
Pressure Wash Tank Interior	C	GME P-100 Cartridge	Hardhat, FR Coveralls, Nitrile inner and outer gloves, steel toe neoprene boots or boot covers, full three point harness with rescue line
Slag excavation	C/D	GME P-100 Cartridge	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, gloves (as needed), steel toe boots.
Triple rinse USTs from outside space, cap remaining lines and inert tanks.	C	GME P-100 Cartridge	Hardhat, FR Coveralls, Nitrile inner and outer gloves, steel toe neoprene boots or boot covers.
Remove and dispose of tanks	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, gloves (as needed), steel toe boots.
Soil excavation	C/D	GME P-100 Cartridge	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, gloves (as needed), steel toe boots.
Soil transport and disposal	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, gloves (as needed), steel toe boots.
Confirmation sampling	D	N/A	Hardhats, safety glasses, cotton coveralls or tyvek (as needed), hi-visibility safety vest, gloves (as needed), steel toe boots.



Decontaminate equipment	D	N/A	Hardhats, full-face shields, safety goggles, Polycoated coveralls, neoprene outer gloves, nitrile steel toe boots, high visible traffic vests
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SAFETY EQUIPMENT AND PROCEDURES

Initial Level of Protection	<i>During this initial survey, air monitoring will be conducted to establish the immediate threat to human health and safety and to determine the appropriate level of PPE for the remainder of the work. After the initial entry and evaluation, the exclusion zone will be modified as necessary.</i>
Training Requirements for Site Workers	<i>HAZWOPER 40, Current 8 Hour Refresher, First Aid /CPR, HAZWOPER Supervisor</i>
Decontamination Procedures	<i>Boots and hands will be decontaminated with soap and water as necessary.</i> <i>Chemical suits will be disposed of as necessary.</i>
Health and Safety Equipment Checklist	
☒ <i>Respirator with Cartridges</i>	
☒ <i>Protective Clothing (coveralls, FRCs)</i>	
☒ <i>Chemical Protective Gloves</i>	
☒ <i>Decontamination equipment</i>	
☒ <i>Steel-toed Boots</i>	
☒ <i>Disposable Boot Covers</i>	
☒ <i>Safety Glasses — use when appropriate</i>	
☒ <i>Hard Hat</i>	
☒ <i>Caution Tape, Traffic Cones, or Barriers</i>	
☒ <i>Emergency Eye Wash Bottles</i>	
☐ <i>Fall Protection Harness</i>	
☒ <i>First Aid Kit: located in field Vehicle</i>	
☒ <i>Fire Extinguisher — located in field vehicle (2 per truck)</i>	
☒ <i>Drinking Water</i>	
☒ <i>Rain Gear</i>	



☒ *High Visibility Vest*

☒ *Cell Phone*

☐ *Radios*

☒ *Round Pointed Shovels*

☒ *Tychem Coveralls*

HAZARD EVALUATION

ITEM	HAZARD	PREVENTION
Ambient weather / PPE load	Heat stress Dehydration	• Must follow WAC 296-62-095 regulation for heat illness prevention • Implement heat stress plan for personnel for any of the following temperature ○ 52° - Nonbreathing clothes including vapor barrier clothing or PPE such as chemical resistant suits ○ 77° - Double-layer woven clothes including coveralls, jackets and sweatshirts ○ 89° - All other clothing • Provide shaded rest area for personnel • Shall provide one quart of water per employee per hour for drinking for the entire shift • Supervisor to track site temperature conditions to monitor for weather
Air monitoring	Inhalation Over exposure	• Ensure current calibration of equipment • Fresh air calibration • Monitor work zone area • Monitor work area perimeter
General work area	Slip / trip / fall	• Designated pathways • Maintain pathways cleared of debris • Enforce good construction housekeeping
General work area – lifting	Lifting	• Plan and stage to minimize long distance carrying • Split heavy loads into smaller loads • Use mechanical lifting aids (i.e. forklift or excavator bucket) where possible and can be done safely • Use assistant for heavy (>30 lbs.) or awkward load • Use proper lifting techniques with good footing
General work area – traffic	Struck by	• Set up visible barricades on access roads; • Wear high visibility safety vests (except in exclusion zone)
Traffic	Struck by	• Set up visible barricades • Wear high visibility safety vests • Only authorized personnel in work zones
Break time	Ingestion	• Thoroughly wash hands before eating, drinking, smoking
Mobilization to site	Site Security Slips, Trips, Falls Traffic	• Clear & Mark off drop off area with barrier tape (if required) • Visual barriers will be in place during work hours, and when site is unattended. • Limit all walking and access to designated paths / destinations

ITEM	HAZARD	PREVENTION
	Overhead Hazards	
Delivery of site equipment & supplies	Back Strains, Hand Injuries	• Verify before lifting that all hoses are bundled and secured in roll. • Do not throw equipment from truck, • Lift any object over 30lbs with assistance. If in doubt of the weight ask for HELP first. • Lift properly with legs and maintain footing.
Excavation, loading, compacting, and transportation activities	Struck by Noise Metals Falls	• PPE on page 5 • Personnel will remain 4' or more from excavation leading edge. • Hearing protection • Back up alarms or rotating beacons • Keep unauthorized personnel out of operating areas • Train personnel on working safely around equipment • Wear Reflective Vests • Make eye to eye contact between operator/driver; • signal or communicate movements • Equipment operator controls movement of personnel in and out of swing zone or equipment travel area • Stay clear of swing zone of equipment
Loading, moving, and transportation activities (on-site)	Struck by Noise	• PPE on page 5 • Hearing protection • Back up alarms or rotating beacons • Keep unauthorized personnel out of operating areas • Train personnel on working safely around equipment • Wear Reflective Vests • Make eye to eye contact between operator/driver; • Signal or communicate movements • Equipment operator controls movement of personnel in and out of swing zone or equipment travel area • Stay clear of swing zone of equipment
Use of hand tools	Pinch points Strain-sprain Difficult- positions Cut-hazards	• Use proper holding and supporting techniques when turning wrenches, screw-drivers, and other torque-enhancing tools • Ensure proper direction and grip on plumbing fixtures prior to use of full body weight for counterbalance – use proper footing stance • Verify correct pipelines prior to disassembly
Debris removal /material handling	Struck by Overhead Skin irritation	• Establish visual contact with operator prior to any movement of excavator bucket • Ground personnel to wear high visibility vest • Avoid skin contact with poison ivy /oak



ITEM	HAZARD	PREVENTION
COVID-19	Illness	• See attached COVID-19 Response Plan
	Death	



ACCIDENT/EXPOSURE PROCEDURES

TYPE CONTACT	FIRST AID
Eyes	• Flush each eyes continuously for 15 minutes • Tilt head to side to ensure liquid runs onto floor not other eye • Refer to EMT for evaluation
Skin	• Remove contaminated clothing immediately • Wash skin continuously for 15 minutes • Refer to physician if redness, swelling, or pain persists after washing
Not Breathing	• Call 911 • Remove to fresh air immediately if respiratory distress develops; • Begin CPR until EMT arrives
Ingestion	• Aspiration hazard • Do not induce vomiting • Do not give anything by mouth
Emergency Contact Information	City of Seattle - • Fire/Ambulance: (911) • Police: (911) • Hospital: Swedish Cherry Hill (206-320-2000)
Accident Reporting	• Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer • Project Manager / Safety Officer will relay information to Contract Manager • Determination will be made regarding need for post-accident drug testing • Notify Client immediately in the event of any incident



EMERGENCY RESOURCES AND PROCEDURES

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
NEAREST HOSPITAL	Hospital: Swedish Cherry Hill Campus 500 17 th Ave, Seattle, WA 98122 (See Figure 2 for directions) 206-320-2000
NEAREST PHONE	Supervisor cell phone
FIRST AID KIT	DH Environmental pickup truck
FIRE EXTINGUISHER	DH Environmental pickup truck
EYEWASH STATION AND EMERGENCY SHOWER	Locate facility emergency eyewash during H&S meeting
EVACUATION ROUTE / MEETING POINT	Determine after arrival at site Draw on site map Discuss with crew before start of project
SPILL CONTAINMENT	Work involving liquids shall be performed to the extent possible on sheet plastic and or secondary containment. In the event of a spill, absorbent shall be applied and the absorbed waste shall be immediately transferred to container.



SIGNATURE PAGE

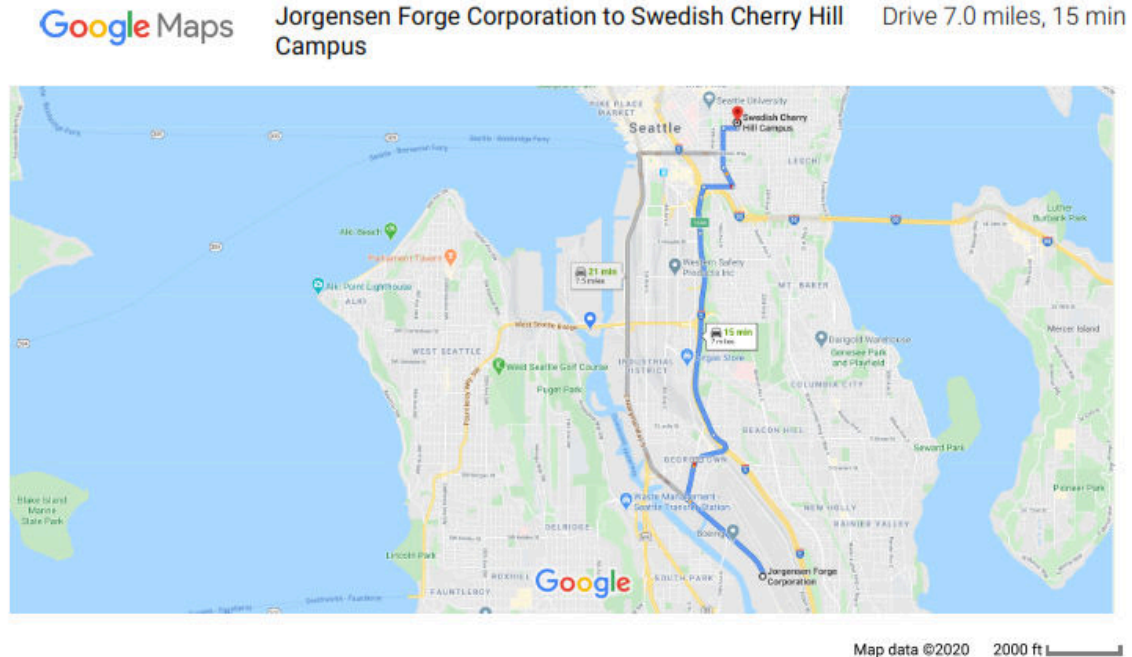
I have read and understand the attached Site Health and Safety Plan and the DH Environmental, Inc. health and safety policies and agree to comply with the requirements described within.

Date	Print Name	Signature

Figure 1: Map and Directions to Swedish Cherry Hill Campus

4/17/2020

Jorgensen Forge Corporation to Swedish Cherry Hill Campus - Google Maps



Jorgensen Forge Corporation

8531 E Marginal Way S, Tukwila, WA 98108

Take E Marginal Way S and I-5 N to 14th Ave S in Seattle

- 13 min (6.2 mi)
 1. Head northwest on E Marginal Way S
 - 1.3 mi
 2. Turn right onto Corson Ave S
 - 0.5 mi
 3. Turn right onto S Bailey St
 - 335 ft
 4. Use the left 2 lanes to turn left onto the Interstate 5 N ramp
 - 0.6 mi
 5. Merge onto I-5 N
 - 2.5 mi
 6. Use the 2nd from the right lane to take exit 164A for Dearborn St toward James St/Madison St
 - 0.4 mi
 7. Keep right, follow signs for Dearborn Street
 - 0.1 mi
 8. Turn right onto S Dearborn St
 - 0.4 mi

1011 SW Klickitat Way, Suite 107
Seattle, WA 98134



4/17/2020

Jorgensen Forge Corporation to Swedish Cherry Hill Campus - Google Maps

- ↩ 9. Turn left onto Rainier Ave S
 i Pass by Raineer Oven Corp. (on the right in 0.2 mi)
_____ 0.3 mi

Continue on 14th Ave S. Drive to 17th Ave

- _____ 3 min (0.7 mi)
↗ 10. Turn right before Rainier Center
_____ 0.5 mi
↗ 11. Turn right onto E Jefferson St
_____ 0.2 mi
↩ 12. Turn left at the 3rd cross street onto 17th Ave
_____ 308 ft

Swedish Cherry Hill Campus

500 17th Ave, Seattle, WA 98122

1011 SW Klickitat Way, Suite 107
Seattle, WA 98134



COVID-19 Response Plan

Project Name: Star Forge

Project Address: 8531 E Marginal Way S, Seattle, WA 98108

Date Produced: 04/17/2020

Revision Date: 6/10/2020



Purpose and Scope

This COVID-19 Response Plan sets forth the requirements and expectations that DH Environmental, Trade Partners, and vendors shall comply with during the COVID-19 pandemic. This plan is designed to meet the guidance requirements of The Centers for Disease Control (CDC) and other applicable regulatory requirements. You should check back frequently with the CDC and other local regulatory agencies for requirements and updates.

This plan shall be distributed to all Trade Partners and others working on site. All contractors working on site shall be required to incorporate CDC recommendations to prevent COVID-19 transmission into all activity hazard analysis (AHA's) and pre-task safety planning for all aspects of work. Additionally, COVID-19 symptoms, precautionary hygiene, and employee expectations will be covered in the Site-Specific Safety Orientation.

How COVID-19 Spreads

Although the first human cases of COVID-19 likely resulted from exposure to infected animals, infected people can spread SARS-CoV-2 to other people.

The virus is thought to spread mainly from person-to-person, including:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

It may be possible that a person can get COVID-19 by touching a surface or object that has SARS-CoV-2 on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the primary way the virus spreads.

People are thought to be most contagious when they are most symptomatic (i.e., experiencing fever, cough, and/or shortness of breath). Some spread might be possible before people show symptoms; there have been reports of this type of asymptomatic transmission with this new coronavirus, but this is also not thought to be the main way the virus spreads.

Although the United States has implemented public health measures to limit the spread of the virus, it is likely that some person-to-person transmission will continue to occur.

Recommended Strategies for Prevention

The following is a summary of the [CDC's recommendations](#) and DH Environmental's guidelines for our projects to prevent the spread of COVID-19:

1) Actively Encourage Sick Employees to Stay Home

Frequently communicate with your employees to stay home if they are feeling ill. They should seek medical care early and stay away from others. You must notify the DH Environmental Project Manager immediately if you send home any employee due to illness, or any employee calls in sick and does not come to work.

2) Employee Exhibits Symptoms / Tests Positive

Exhibits Symptoms: If an employee has a high fever and is experiencing shortness of breath but has not taken a test or has not received the results from a test, we should presume a positive for COVID – 19 until we know otherwise. The employee cannot report to work until:

- The employee receives a negative test or
- The employee is symptom free, and:
 - Fever free for 72 hours without the use of medication, and
 - At least 7 days have passed since the employee's symptoms first appeared

Always follow the guidance of your health care provider and state and local health department.

You must notify the DH Environmental Project Manager immediately if you send home any employee, or they call in sick from work, because they are experiencing COVID – 19 symptoms. You must also keep your DH Environmental Project Manager updated on the condition of any such employee and notify the Project Manager prior to such employee returning to work. Cleaning procedures outlined in the Sanitation and Cleanliness procedure of this document must immediately be followed.

Positive Test: If any jobsite personnel (employee, trade partner employee, etc.) has tested positive for COVID – 19 or has been in close contact with someone who has tested positive for COVID – 19 or has a family member that lives with them that has tested positive for COVID -19 must self-quarantine for at least 14 days.

If it is determined that an infected employee spent prolonged time on the project or in the office, a third-party cleaning company specializing in biohazard cleanup shall perform appropriate deep cleaning of the applicable area and tools or equipment. However, in the event those options are not available standard cleaning crews are acceptable provided they utilize proper PPE, cleaning products as recommended by the CDC, and shut down the project for 72 hours. The areas impacted must be closed and secured until cleaned and as recommended by the cleaning company.

3) Travel and Access to Our Sites

Employees at your company who have been to a Level 3 country listed on the [CDC Alert List](#) within the past 14 days will not be permitted to return to the project site for at least 14 days after returning from a Level 3 country, and only after they have been symptom free for at least 14 days from the date they returned to the United States. If an employee at your company had close contact with an individual that has traveled to a Level 3 country within the past 14 days, these individuals will not be permitted to return to the project site until they have been symptom free for at least 14 days from the date they came in contact with the traveler that returned from the Level 3 country.

If an employee had close contact with an individual who has a confirmed positive test result for COVID-19, they are not allowed at the project site until they have been symptom free for 14 days from the date of contact.

4) Social Distancing

All employees on site shall be trained on the following social distancing techniques. Social distancing requirements include the following:

Modified: 06-10-2020

- Limit physical contact with others. Do not shake hands, hug, fist-bump, or high five.
- Direct employees to increase personal space to at least 6 feet where possible. This includes tailgate meetings, lunch areas, project meetings, common areas including personnel hoists and elevators.
- Attendance at safety meetings shall be communicated verbally and the foreman will sign in each attendee. Contractors should not pass around a sign-in sheet or mobile device to confirm attendance.
- Keep group sizes under ten people and maintain proper social distancing of six feet or more.
- When possible, conduct meetings by teleconference.
- Employees shall be instructed to take breaks and lunch in shifts to reduce the size of the group in the break/lunch area at any one time to less than 10 people.
- If an employee can perform their job duties while working remotely, they should do so and not come to the project or any of the project offices. This applies primarily to DH Environmental and Trade Partner supervisory staff.
- Efforts should be made to designate crews to remain together to minimize intermixing of crew members.

If there is a task that must be completed and there are no alternative measures to perform the work while maintaining social distance, a risk assessment and control plan will be prepared by the Trade Partner performing the work. Workers must be trained on this risk assessment and control plan. This plan must be attached to the SSHP and posted in the area. All PPE and controls must be provided by the employer.

5) Risk Levels

The following guidance has been provided by the Washington State Department of Labor and Industries.

www.Lni.wa.gov/agency/outreach/novel-coronavirus-outbreak-covid-19-resources

Negligible Risk

Cloth face covering may be required in some circumstances when the risk for transmission is “negligible” (very low).

For example, you do not need to wear a face covering if you work or drive alone. However, a cloth face covering is required if you work outdoors or in a building while around, but separate, from several other people, and only need to pass within six feet of them once or a twice a day.

Examples of negligible-risk jobs:

- Telecommuters who are the sole occupant in an office with a door.
- Small landscaping crews of three or four workers who drive alone and work outdoors apart from each other all day.
- A crane operator isolated in an enclosed cab.
- Delivery drivers who have no face-to-face interaction with others when they pick up or drop off packages.

Low Risk

A reusable cloth face covering is required when risk from transmission is low.

COVID-19 RESPONSE PLAN

Risk for transmission is low when you work around or travel with others and you stay at least six feet apart, except for briefly passing by others up to several times a day.

Risk is also considered low when one or two workers provide personal services to health clients who also wear a cloth face covering.

Examples of low-risk workplaces and jobs with low-risk activities:

- Light manufacturing facilities that are set up to keep workers separated while they operate machinery and perform other tasks.
- Custodial staff who work after hours and do not clean up after known COVID-19 cases.
- One or two healthy workers in a room providing haircuts or other personal services to clients who also wear a face covering.
- Waiters at restaurants and cafes with curbside pick-up services only.
- Mechanics working on vehicles at repair shops.

Medium Risk

Disposable masks are required when risk for transmission is medium. Examples of disposable masks include dust mask used for hobbies, but not approved by the National Institute for Occupational Safety and Health (NIOSH); surgical-style masks not approved by the FDA; and masks such as KN90s or KN95s approved in other countries. Risk for transmission is considered medium when you stay at least six feet away from others except for several times throughout the day when the six-foot distance is broken for several minutes and prevention measures such as physical barriers aren't feasible. Risk is also considered medium when three to six people work in a room providing personal services to healthy clients who wear a cloth face covering.

Examples of medium-risk jobs and medium-risk activities:

- Commercial fishing crews.
- Field workers being transported to a nearby planting site.
- Grocery-store-produce stockers who work during store hours around customers.
- Manicurists working with clients wearing cloth face coverings.
- Kitchen workers in restaurants.
- Ride-service drivers who only pick up masked passengers.
- Transit operators.

High Risk

Respirators are required when risk for transmission is high. Respirators for high-risk activities must be approved by NIOSH (or by an equivalent approval body from outside the United States). Examples include elastomeric (rubber-like) half-or full-facepiece respirators with cartridges, tight or loose-fitting powered-air purifying respirators (PAPRs) with particulate cartridges, and filtering facepiece N-, R-, or P-95s to P100s (when supplies allow).

Risk for transmission is considered high when you work or travel within three feet of others for more than 10 minutes an hour, many times a day and other prevention measures aren't feasible.

Risk is also considered high when you:

- Clean and sanitize areas recently occupied by a person with known COVID-19 illness.
- Provide services in residences of clients with known COVID-19 illness.
- Perform procedures that aerosolize saliva, mucous, or secretions from eyes; or that cause increased or forced breathing, coughs, sneezes, or yawning.

6) Face Coverings

All employees on the site should cover their mouth and nose with a cloth face cover when around others. If someone has trouble breathing or has a medical reason why they can't wear a face covering, they should

Modified: 06-10-2020

COVID-19 RESPONSE PLAN

notify their supervisor. The CDC has issued [guidance on facial coverings](#):

- Continue to keep about 6 feet between yourself and others. The cloth face cover is not a substitute for social distancing.
- Avoid touching your face and face cloth at all times.
- A clean facial covering should be worn each day and be able to be laundered and machine dried without damage or change to shape.
- Wash your hands before putting your covering on and immediately after taking it off. Individuals should be careful not to touch their eyes, nose, and mouth when removing their face covering.
- Cloth face coverings should fit snugly but comfortably against the side of the face and allow for breathing without restriction.

Protection such as N95 respirators should only be worn if the task requires their use and if the employer is following applicable OSHA regulations and has a written program.

Examples of high-risk activities:

- Working with multiple people in a small room, confined space, vehicle or other small space where saliva particles can accumulate in the air.
- Using an ultrasonic scaler or air and water syringe on clients in a dentist office.
- Administering medication via nebulizers.
- Performing spirometry or coaching clients on deep or forced breathing exercises.
- Providing in-home maintenance or pet euthanasia services to a masked client with known or potential COVID-19 illness.

Examples of high-risk jobs:

- Custodial staff who clean up after known COVID-19 cases.
- Dentists and dental hygienists.
- Mortuary services.
- Veterinarians who provide in-home pet euthanasia.

Currently DH Environmental falls under the “Negligible and Low Risk” categories when performing our routine job functions. If a project or a portion of project falls in the “Medium or High risk category than the DH Environmental Health and Safety Manager should be notified before work in those categories take place.

7) Sanitization and Cleanliness

- Conduct daily cleaning measures of all frequently touched surfaces (for example: tables, doorknobs, light switches, tools, gang boxes, desks, toilets / out houses, faucets, sinks) with household cleaners or disinfectants that are appropriate for the surface. Labels contain instructions for safe and effective use of the cleaning product including precautions you must take. Verify you have the Safety Data Sheets for these chemicals and that employees are trained in their use.
- Practice best practices for respiratory etiquette including cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Used tissues should be immediately discarded in the garbage can.

COVID-19 RESPONSE PLAN

- Promote frequent and thorough hand washing with soap and water for at least 20 seconds. All workers should wash their hands often, especially before eating, smoking, drinking, or after blowing your nose, coughing or sneezing. Workers should refrain from touching their face. If soap and water is not available, alcohol-based hand sanitizers that contains at least 60% alcohol shall be utilized.
- DH Environmental will provide handwashing stations around the jobsite and at each portable toilet location.

8) Communications

If an employee tests positive for COVID-19, the employer should interview the infected or presumptively infected employee to determine the tools that they were using, where they were working on the job site and the people with which they have been in close and prolonged contact within the past 5 days. You should speak with each person on that list and if they agree that they have been in close and prolonged contact with the infected or presumptively infected employee, they should be sent home and self-quarantine for 14 days, or until a confirmed negative test result is reported.

Employers should inform fellow employees of their possible exposure to COVID-19 in the workplace but maintain personally identifiable information confidential. Additional considerations for communication include the following:

- Method of transmission is unknown
- Detail what we are doing to ensure the health of employees
- Deep cleaning of affected areas
- Daily cleaning of common areas
- Remind employees to self-monitor for any illness and report all symptoms to their supervisor immediately

9) Work Stoppage

In the event of a stop work or shut down directed in writing from the Owner, Owner's Representative, or other Government agency, DH Environmental will communicate this information to our trade partners, vendors, design partners, staff and craft. A communication plan will be put into place to relay information related to the project to each respected representative. Prior to closing the project our priority will be to safe off the project with the following measures:

- Cover, enclose or otherwise protect the work in place that is reasonably completed within the 48-hour period from damage and environmental conditions.
- Include any signage that is helpful to secure the site such as "NO ACCESS – RESTRICTED AREA".
- Secure access to the project and any high-risk areas such as tower cranes.
- After the 48-hour period, all personnel should be off the site, except for any necessary security personnel that are part of the make-safe plan.
- Areas with active abatement activities will require direction from the owner and DH Environmental. Additional considerations and protection must be taken for any hazardous materials that may be impacted by weather.
- Secure and protect all equipment and stored materials.

10) Additional information and Resources:

- <https://www.cdc.gov>
- <https://www.osha.gov/>
- www.lni.wa.gov/agency/outreach/novel-coronavirus-outbreak-covid-19-resources

associated with Ecology UST identification number 6163 and were grouped into a North Tank Vault (UST-26 through -35) and a South Tank Vault (UST-15 through -22), as shown in Figures 2 through 4.

To be consistent with previous naming conventions, the names of all tanks referenced in this report follow the naming convention presented by Shannon & Wilson in 2019 (Shannon & Wilson, 2019). A copy of Shannon and Wilson's 2019 figure and naming convention is provided for reference in Appendix A.

The USTs in each tank-bed were buried below grade but within concrete vault structures that extended above grade. Both tank nests were constructed within the basement of former buildings. Once the former buildings were demolished, the voids around the tanks were filled with sand and slag that was available from forging operations on-site. The North Tank Vault included a concrete base that was approximately 5-feet below the surrounding grade. The concrete walls of the South Tank Vault extended slightly deeper and did not contain a concrete bottom.

DH Environmental collected samples from the tank contents and surrounding fill-slag for waste designation purposes in 2020. The contents of the USTs and surrounding fill material was designated as non-hazardous waste (DH Environmental, 2020; DH Environmental, 2020b; DH Environmental 2020c).

1.3 LOCAL GEOLOGY AND HYDROGEOLOGY

The Property is located within the Duwamish/Cedar River valley, part of the Puget Lowland, a regional low-lying trough between the Cascade Range to the east and the Olympic Mountains to the west. The Puget Lowland has largely been filled with sediment deposits left behind by glaciers that advanced and retreated multiple times through the Puget Lowland within the last 2 million years. Sediment within the Duwamish Valley primarily consists of sand and silt which has washed down from Mt. Rainier. This material is often interbedded with layers of silt, clay, and organic soils from localized deposits associated with lakes and ponds that formed along the river valley, or mudflats that formed along Puget Sound. Fill materials were also placed throughout the River Valley since the early 20th century, including in portions of the Property when the Duwamish Waterway was straightened, dredged, and historical channels and embayments were filled.

Shallow subsurface soils at the Property generally consist of a mixture of sand, silty sand, and gravel, to depths up to 24 feet below grade. Fill materials tend to be thickest at the western end of the property along the LDW (Shannon & Wilson, 2022). Soils below the North Tank Vault primarily consisted of brown to gray, fine to medium sand with trace gravel. Shallow soils at the South Tank Vault were similar, while soils below the base of the excavation contained higher amounts of silt and organics, and appeared to be native soils.

Groundwater in the vicinity of the tank vaults, as measured in nearby monitoring wells MW-11, MW-14, and MW-15, has ranged from approximately 10.5- to 12-feet below grade (Shannon & Wilson, 2022). Groundwater flow at the Property generally moves west, but varies depending on the season and proximity to the LDW (Shannon & Wilson, 2022). Groundwater was not encountered during the UST decommissioning activities.

Section 2: UNDERGROUND STORAGE TANK DECOMMISSIONING

This section describes the UST decommissioning activities for the 18 USTs on the Property. The tanks and piping inside the concrete vaults were decommissioned and removed between August 9 and August 17, 2023. The piping outside of the North Tank Vault was removed on August 21 and October 11, 2023. The piping outside of the South Tank Vault was removed on October 11 and 12, 2023.

UST decommissioning activities were overseen by Mr. Brad Reilly with ECI Environmental Services (ECI), under subcontract to the demolition contractor for the project, Construction Group International, of Woodinville, Washington (CGI). Mr. Reilly is certified by the International Code Council for UST Decommissioning. A DH Environmental licensed hydrogeologist was also on site to observe the decommissioning and to perform site assessment activities.

2.1 PRELIMINARY ACTIVITIES

2.1.1 Ecology 30-day Notice

Prior to decommissioning the USTs, Star Forge submitted a 30-Day Notice of Intent to Decommission USTs form to Ecology, as required by WAC 173-360A-0810. A copy of the 30-Day Notice is included in Appendix B.

2.1.2 City of Tukwila Fire Department Permit

The City of Tukwila requires a permit for the permanent closure of USTs. Prior to decommissioning the USTs, Star Forge obtained a Fire Permit for Tank Removal from the City of Tukwila. A copy of Fire Permit F23-0135 is included in Appendix C.

2.1.3 Underground Storage Tank Cleaning

Prior to removal of the USTs, the tanks were cleaned and triple-rinsed by Marine Vacuum Services of Seattle, Washington (MarVac). Rinse certificates are provided in Appendix D.

2.2 UNDERGROUND STORAGE TANK REMOVAL

CGI removed the USTs in both tank vaults between August 9 and August 18, 2023. Once the tanks had been cleaned, the above-ground concrete vault structure and fill materials overlying the tanks were removed. Three USTs in the North Tank Vault, UST-26, -28, and -31, were previously filled with sand. The top of these three tanks were cut open and the sand was removed with an excavator. Residual sand was removed by tilting the tanks on end and dumping the loose sand out. Once the sand had been removed, the empty tanks were removed in the

same manner as the others, by lifting the tanks out of the ground using an excavator. Once removed from the ground, the tanks were scraped and brushed clean to remove any loose soil or debris prior to transport. They were then loaded onto trucks and shipped for recycling as described in Section 2.3. Removal and disposal of the concrete vault structures and backfill materials are also described in Section 2.3.

USTs -26 through -35, in the North Tank Vault, generally appeared in good condition at the time of removal. They were well protected with numerous sacrificial anodes surrounding each tank. The paint on the tank walls was still intact, and no holes or areas of significant corrosion were visible.

USTs -15 through -22, in the South Tank Vault, generally appeared in much worse condition than the tanks from the North Tank Vault. No sacrificial anodes were present on the South Tanks, and significant corrosion and pitting was visible on each tank. In some instances, corrosion holes were visible completely through the tank walls.

Photos of the tank removal work are included in a photo log in Appendix E. Decommissioning certificates are included in Appendix F.

Piping within the concrete vaults of each tank area was removed concurrently with the tanks. The piping was disconnected at each tank prior to the tanks being removed. ECI had a vacuum trailer on site for all piping removal work in the event liquids were present in the piping. No liquids were observed in any of the piping during removal. Removal of the product piping outside of the concrete vaults is described in Sections 2.2.1 and 2.2.2. Site assessment sampling activities are described in Section 3.

2.2.1 Piping Removal – North Tanks

At the North Tank Vault, a 4-inch diameter product pipe extended from the southeast corner of the concrete vault, due south towards the Aluminum Heat Treat Building (Aluminum Building), as shown on Figure 3. This is consistent with as-built drawings for the North Tank Vault. The pipe was exposed and removed on August 21, 2023. The pipe appeared to be a single length pipe without couplers. The pipe ran underneath the north foundation wall of the Aluminum Building where it was cut flush with the foundation wall. No liquids were observed in the pipe when it was cut. Soil from the piping trench was temporarily stockpiled for offsite disposal.

On October 11, 2023, after the Aluminum Building had been demolished, the remaining section of piping was removed. The piping was discovered to have been previously cut and capped approximately 1-foot north of the northern foundation wall of the Aluminum Building. The pipe was bent to form a 90-degree elbow and it had been cut and capped just past the elbow. Based on an interview with a former employee, this pipe had been removed to make room for the installation of the Aluminum Heat Treat Furnace Pit in the mid-1970s. At that time the building

use transitioned from the Powerhouse into use as the Aluminum Heat Treat Building. The product pipe is shown in Photo 7 in the Photo Log in Appendix E.

Soil generated during removal of the last segment of piping was added to the temporary soil stockpile, where it was covered until the product piping had been removed from the South Tank Vault. Disposal of the soil is described in Section 2.3.

2.2.2 Piping Removal – South Tanks

At the South Tank Vault, a single 2-inch diameter product pipe was observed to extend from inside the tank vault, west beneath the Aluminum Building. After the Aluminum Building had been demolished, the piping beneath the slab was exposed and removed on October 11 and 12, 2023. The product piping alignment is shown in Figure 4, and it appears to have been installed so that it was routed around the former Aluminum Heat Treat Furnace Pit.

Consistent with historical drawings of the area, a second pipe, believed to be a fuel return line, was visible in the same trench as the product pipe. A third pipe, believed to be a steam line, was also present. The second and third pipes appeared to have been previously cut approximately 15-feet south of where the first pipe entered the tank vault. A small electrical conduit was also present in the same trench, and all three pipes and the electrical conduit ran west underneath the former Aluminum Building. At the west edge of the Aluminum Building, the piping turned and ran north approximately 15-feet, where it entered a utilidor. The utilidor continued approximately 25-feet north, where it turned and ran west underneath the former drive lane between the main shop building and the aluminum building.

The top of the utilidor was constructed with a concrete slab approximately 12-inches thick. The portion of the slab underneath the drive lane was also covered with a layer of asphalt paving. The concrete lid was broken apart using a hydraulic hammer to expose the product piping in the utilidor. Once exposed, the product lines from the tank vault were observed to enter the utilidor where at least some of them appeared to have been cut and capped. Other lines of unknown purpose were also present in the utilidor, including portions of lines that had been cut or broken at some point prior to the utilidor being exposed. Most of the lines in the utilidor were not labeled, or the labeling was not legible. Some of the lines were still present where the utilidor entered the main shop building, and labeling on the shop ends of the pipes indicated at least two pipes labeled as “fuel oil”, one pipe labeled as “fuel oil return”, one pipe labeled “propane”, and another pipe labeled “compressed air”. More pipe segments were visible in the utilidor than were visible inside the shop building, and the original purpose or contents of these lines are unknown. Photos of the piping removal, including piping in the utilidor, are included in the Photo Log in Appendix E.

CGI cut the rebar from the top of the utilidor to allow access to the underlying piping. ECI had a vacuum trailer on site for the piping removal work in the event liquids were present in the piping. The piping was lifted out of the utilidor using an excavator to slope the piping away from portions that had to be cut with a demolition saw. No liquids were observed in any of the piping

during removal. After the rebar and piping had been cut and removed, the utilidor was emptied of debris in preparation for sampling and backfill.

Rainwater was observed to have accumulated in the utilidor prior to breaking open the concrete lid. The water was confirmed during an inspection of the utilidor by CGI on October 10, 2023, prior to demolition of the utilidor top. Additional rainwater may have also entered during rain events on October 11, 2023, when 0.39 inches of precipitation fell (NOAA, 2024). A slight sheen was present on the water along with a petroleum type odor. A sample of the water was collected using a disposable bailer on October 12, 2023, for waste designation purposes, and the water was removed from the utilidor by ECI using a vacuum trailer. Approximately 275-gallons of water was removed and temporarily stored in a Department of Transportation (DOT) rated shipping tote. Once the water had been removed, CGI crews removed the remaining pieces of concrete debris in preparation for soil sampling and backfilling.

Prior to the utilidor being backfilled, a soil sample was collected beneath the utilidor on October 13, 2023 as part of site assessment activities, as described in Section 3.2. Disposal of the soil, concrete and water generated during piping removal activities are described in Section 2.3

2.3 WASTE DISPOSAL

2.3.1 Underground Storage Tank and Product Piping Disposal

Each of the 18 USTs were loaded onto trucks for transportation to a metal recycling facility. Product piping was combined with rebar from the concrete vault structure and other recyclable materials generated from demolition activities. All scrap metal from the project was disposed of to Sutter Metals in Tacoma, Washington, or Seattle Iron and Metals Corporation, in Seattle, Washington.

2.3.2 Concrete and Soil Disposal

On August 14, 2023, the concrete vault structures were sampled for waste designation purposes. Sampling was conducted to confirm that petroleum or metals that may have leached into the concrete would not designate as hazardous or dangerous waste. The concrete was determined to be non-hazardous waste suitable for disposal to a subtitle D landfill. A copy of the waste designation package is included in Appendix G.

The backfill material consisting of slag, sand, and gravel surrounding the tanks was previously sampled and designated as non-hazardous waste (DH Environmental, 2020). As a result, no further sampling was conducted of the tank backfill, and it was loaded into trucks for offsite disposal. Because the South Tank Vault did not contain a concrete bottom, backfill materials were removed to the depth of the base of the tanks, approximately 8-feet below grade.

Once the tank backfill materials were removed, the concrete vault structures were also removed.

The concrete from the vault structures was processed within the footprint of the respective excavation areas to remove rebar and facilitate loading onto trucks. The rebar was segregated for recycling and the concrete was loaded into trucks for offsite disposal.

Soil and concrete generated during the product piping removal was temporarily stockpiled until all piping removal activities were complete. The soil was sampled for waste designation purposes and determined to be non-hazardous waste, suitable for disposal to a subtitle D landfill. A copy of the piping soil designation package is included in Appendix H.

A total of 4,082.59-tons of soil and concrete were transported for disposal to Roosevelt Regional Landfill, in Roosevelt, Washington. The Roosevelt Landfill is a permitted Subtitle D Landfill operated by Republic Services. A copy of the soil and concrete disposal records is included in Appendix I.

2.3.3 Water Disposal

Analytical results for the tote of water pumped from the South Tank Vault piping utilidor resulted in a waste designation determination that the water was non-hazardous waste. A copy of the waste designation package is included in Appendix J. The water was temporarily stored in a DOT-rated 275-gallon shipping tote until it was pumped out via vacuum truck by DH Environmental on December 4, 2023. Due to the small volume of water, it was combined with water generated during cleaning of several subsurface vaults on the property, unrelated to the UST decommissioning activities. This water was temporarily stored in a 20,000-gallon frac tank, before being disposed of to MarVac in Seattle, Washington in December 2023.

2.4 BACKFILL AND RESTORATION

Following the collection of site assessment samples, described in Section 3, the North and South Tank Vault excavations were backfilled between September 6 and 15, 2023. The base and sidewalls of the excavation were lined with plastic sheeting prior to backfilling. The backfill was placed in lifts and compacted to 95% compaction. Compaction testing was conducted by Krazan and Associates under subcontract to CGI.

Backfill of the product piping trenches and piping utilidor was conducted on October 13, 2023.

Backfill material consisted of 1-1/4" crushed rock sourced from the ICON Materials quarry in Auburn, Washington. Prior to being imported into the Site, all import backfill was tested at the quarry to confirm it met backfill requirements, as specified in the Interim Action Work Plan. Analytical results for the import backfill are reported under separate cover as part of the Interim Action Completion Report.

Paving of the excavation areas and piping trenches was conducted as part of final site restoration in March, 2024.

Section 3: SITE ASSESSMENT SAMPLING

Following removal of the USTs and product piping, site assessment soil samples were collected as described in the following sections. Sample locations are shown in Figures 3 and 4. All confirmation soil samples from the UST vaults were collected from the excavator bucket, with care taken to ensure the sample was not collected from soil in direct contact with the bucket. All soil samples were collected in general accordance with the Ecology-approved Interim Action Work Plan (IAWP; DH Environmental, 2023). Groundwater was not encountered during the tank removal or site assessment sampling activities.

3.1 NORTH TANK VAULT

Site assessment soil samples from the North Tank Vault and associated product piping were collected between August 21 – 30, 2023. Soil samples were collected from the base and sidewalls of the excavation following removal of the concrete vault surrounding the former USTs.

Soil samples from the base of the excavation were collected from an approximate depth of 6.5-feet below grade. This depth was approximately 0.5-feet below the base of the former concrete slab, at the interface with native soil. Soil samples from the sidewall of the excavation were collected from an approximate depth of 5-feet below grade, near the base of the sidewall.

A total of 27 soil samples were collected from the base and sidewalls of the North Tank Vault, including one duplicate sample. A total of three soil samples were collected beneath the piping run from the North Tank Vault. Piping samples were collected by hand, directly from the base of the piping trench following removal of the piping.

The majority of soil samples from the base of the North Tank Vault excavation were collected along the east side of the excavation, beneath the former fill ports of the tanks where releases were most likely to have occurred. One bottom sample, NT-SS-35, beneath the former tank UST-35, was moved to sample soil where a former sump was observed in the concrete vault. This sump was believed to be a feature associated with the former basement structure of the building that the tanks were installed in following building demolition.

Sidewall samples from the North Tank Vault were generally distributed equally around the perimeter of the excavation. Sidewall samples NT-SS-13, NT-SS-14, NT-SS-17, and NT-SS-18, were adjusted to focus on areas where staining was observed. Sidewall sample NT-SS-14 and bottom sample NT-SS-31 were collected near the former fill port for the USTs.

3.2 SOUTH TANK VAULT

Prior to collecting site assessment samples in the South Tank Vault, two test pits were advanced at the north and south ends of the South Tank Vault to investigate for the presence of a concrete

slab. Each test pit was advanced to a depth of 4-feet below the base of the tanks. The test pits confirmed that concrete was not present, which is consistent with as-built records for the South Tank Vault.

Site assessment soil samples from the South Tank Vault and associated product piping were collected between August 22 and October 13, 2023. Soil samples were collected from the base and sidewalls of the excavation following removal of the concrete vault surrounding the former USTs.

Soil samples from the base of the excavation were collected from an approximate depth of 8.5-feet below grade. This depth was approximately 0.5-feet below the base of the former tanks, at the interface with native soil. Soil samples from the sidewall of the excavation were collected from an approximate depth of 6.5-feet below grade, near the base of the sidewall.

A total of 23 soil samples were collected from the base and sidewalls of the South Tank Vault, including one duplicate sample. A total of three soil samples were collected beneath the piping run from the South Tank Vault. Piping samples ST-piping-SS-21 and ST-piping-SS-22 were collected by hand, directly from the base of the piping trench following removal of the piping. Piping sample ST-piping-SS-20 was collected from an excavator bucket, from a depth of 6.5-feet below grade, beneath a utilidor.

All of the soil samples from the base of the South Tank Vault excavation were collected along the west side of the excavation, beneath the former fill ports of the tanks where releases were most likely to have occurred. Sidewall samples from the South Tank Vault were generally distributed equally around the perimeter of the excavation. Sidewall sample ST-SS-15 was collected from stained soil near the former fill port for the USTs.

3.3 SAMPLE LOCATIONS

Site assessment soil sampling locations are shown on Figures 3 and 4. Sample locations were recorded using a mapping grade GPS unit capable of sub-meter accuracy (Trimble GeoXH or Trimble DA2). Where it was not safe to enter an excavation, the sample locations were recorded by surveying the corresponding northing or easting that lined up with each sample.

3.4 SITE ASSESSMENT ANALYTICAL RESULTS

All Site Assessment soil samples were analyzed for diesel-range organics (DRO) by Method NWTPH-Dx and gasoline-range organics (GRO) by Method NWTPH-Gx.

In accordance with the IAWP, and in consultation with Ecology, multiple soil samples were selected for follow-up analysis for the following compounds:

- ☐ 1-2, dibromoethane (EDB), 1-2, Dichloroethane (EDC), methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene and xylenes (BTEX) and halogenated VOCs (HVOCs) by EPA Method 8260D,
- ☐ Polychlorinated biphenyls (PCBs) by EPA Method 8082, and,
- ☐ Carcinogenic Polyaromatic Hydrocarbons (cPAHs) and naphthalenes by EPA Method 8270E/Selected Ion Monitoring (SIM);
- ☐ Total RCRA 8 metals plus copper, nickel, and zinc, by EPA Methods 6010D (arsenic, barium, cadmium, chromium, lead, selenium, and silver) and 7471B (mercury).

The samples selected for follow-up analysis were chosen in consultation with Ecology, following review of the initial DRO and GRO data. Of the 15 samples selected for follow-up analysis, MTBE, EDB, EDC, and benzene were not reported in any of the soil samples at a concentration greater than or equal to the practical quantitation limit (PQL). Mercury, selenium and silver were also not reported in any of the soil samples at a concentration greater than or equal to the PQL. PCBs were reported in four samples at a concentration greater than or equal to the PQL, all at a total concentration of less than 1 milligram per kilogram (mg/kg). Naphthalene was reported in most follow-up samples at low concentrations, with the highest concentration reported at 2.9 mg/kg. A discussion of the results for select compounds is described in Sections 3.4.1 through 3.4.5.

The analytical results for DRO, GRO, Toluene, Ethylbenzene, and Xylenes, cPAHs, total metals, and PCBs are summarized in Tables 1 through 6. In each table, a compound was only listed if it was reported in at least one sample at a concentration greater than or equal to the PQL. A copy of the laboratory analytical reports is included in Appendix K.

3.4.1 Diesel- and Gasoline-Range Hydrocarbons

GRO and DRO were reported in soil samples from both the North and South Tank Vaults at elevated concentration.

GRO was reported at a maximum concentration of 480 mg/kg in the North Tank Vault, in sample NT-SS-17-5.0, which was collected along the south sidewall of the excavation. The highest concentration of DRO in the North Tank Vault was reported in the same sample at a concentration of 225,000 mg/kg.

GRO was reported at a maximum concentration of 1,300 mg/kg in the South Tank Vault, in sample ST-SS-8-8.5, which was collected from the base of the excavation at the south end. The highest concentration of DRO in the South Tank Vault was reported at a concentration of 18,000 mg/kg in sample ST-SS-17-6.5, located along the middle of the west sidewall of the excavation. The results for DRO and GRO for the North and South Tank vaults are summarized in Tables 1 and 2, respectively.

3.4.2 Toluene, Ethylbenzene, and Xylenes

Benzene was not reported in any of the site assessment samples at a concentration greater than the PQL. Toluene, ethylbenzene, and xylenes were reported at low concentrations in several samples. The results for Toluene, Ethylbenzene, and Xylenes are summarized in Table 3.

3.4.3 cPAHs

Each of the seven cPAH compounds was reported in one or more of the soil samples selected for follow-up analysis. Soil sample ST-piping-SS-22 contained the highest toxic equivalent concentration (TEC) of benzo(a)pyrene at 0.830 mg/kg. The results for cPAHs are summarized in Table 4.

3.4.4 Metals

Cadmium was only reported in one sample at a concentration greater than the PQL, sample ST-piping-SS-20-6.5, at a concentration of 0.85 mg/kg. This sample was collected beneath the product piping utilidor between the former Aluminum Building and the main shop building.

Arsenic was reported in three samples at a concentration greater than the PQL. The highest concentration of arsenic was reported in sample NT-SS-31-6.5, which was collected from the base of the North Tank Vault, near the midpoint along the east side, at a concentration of 39 mg/kg.

Nickel was elevated in one sample, NT-piping-SS-24, at a concentration of 910 mg/kg. This sample was collected beneath the northernmost product piping sample from the North Tank Vault. The results for total metals are summarized in Table 5.

3.4.5 PCBs

PCBs were reported in four of the follow-up soil samples at a concentration greater than the PQL. The highest concentration was reported in sample NT-piping-SS-24-2.0 at a concentration of 0.52 mg/kg. The results for PCBs are summarized in Table 6.

Section 4: CONCLUSIONS

The purpose of a UST site assessment is to determine if there has been a release of a regulated substance from a UST system. Confirmed and suspected releases have been reported from both former UST vaults as early as 1990 when Dames & Moore first identified elevated levels of petroleum in soil west of the former Aluminum Heat Treat Building (Dames & Moore, 1990). Later findings by SEACOR in 1991 supported this when they reported that three USTs in the North Tank Vault failed tightness testing. An additional investigation conducted in 1991 by SEACOR also identified light non-aqueous phase liquid (LNAPL) west of the former South Tank Vault (SEACOR, 1993 and 1993b). LNAPL was again identified west of the former North Tank Vault in 1995, along with high concentrations of DRO in soil west of the former South Tank Vault (Dames & Moore, 1999). More recent investigations by Shannon & Wilson also identified likely releases from both former UST vaults, including the presence of a significant LNAPL plume on groundwater west of the South Tank Vault (Shannon & Wilson, 2020).

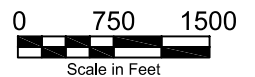
As described above, multiple investigations conducted over a 30-year period have identified likely releases from the former North and South Tank vaults at the Jorgensen Site. The site assessment activities described in this report were conducted pursuant to Agreed Order No. DE 21034 following UST decommissioning by removal. In accordance with the requirements of WAC 173-360A-0730(8)(g)(iii), the results of this site assessment conclude there has been a release of a regulated substance from both the former North and South UST systems at the former Jorgensen Forge Site.

We recommend this information be considered by Ecology and EMJ during the remedial investigation and final cleanup of the Site.

Section 5: REFERENCES

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SoundEarth Strategies, 2019. Star Forge, LLC – October 2019 UST Site Visit; Former Jorgensen Forge Facility, 8531 East Marginal Way, Tukwila, Washington, Project Number: 0995-002. Letter to Ms. Maureen Sanchez, WA State Dept. of Ecology. November 21.



Vicinity Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

02-05-2024

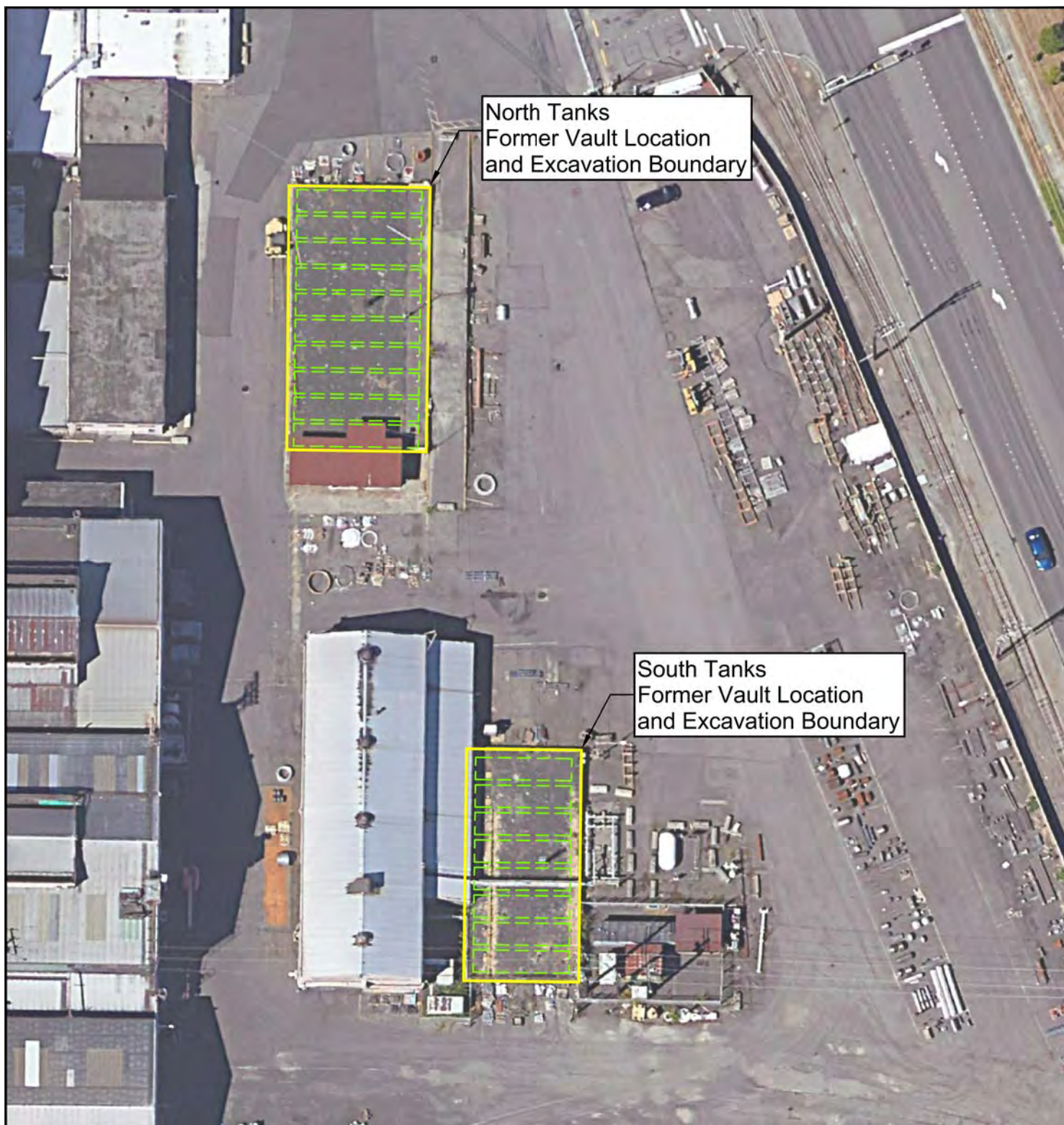
Figure
1

Legend

— Former Jorgensen Forge Property



Background Images Source: Google Earth Pro 5/26/2018



Legend

- Former Underground Storage Tank Location



North & South Tank Vault Location Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, Washington

02-05-2024

Figure

2

Background Images Source: Google Earth Pro 5/26/2018





**North Tanks
Sample Location Map**

Former Jorgensen Forge Facility 8531 E. Marginal Way S. Tukwila, Washington	01-26-2024	Figure 3
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Legend

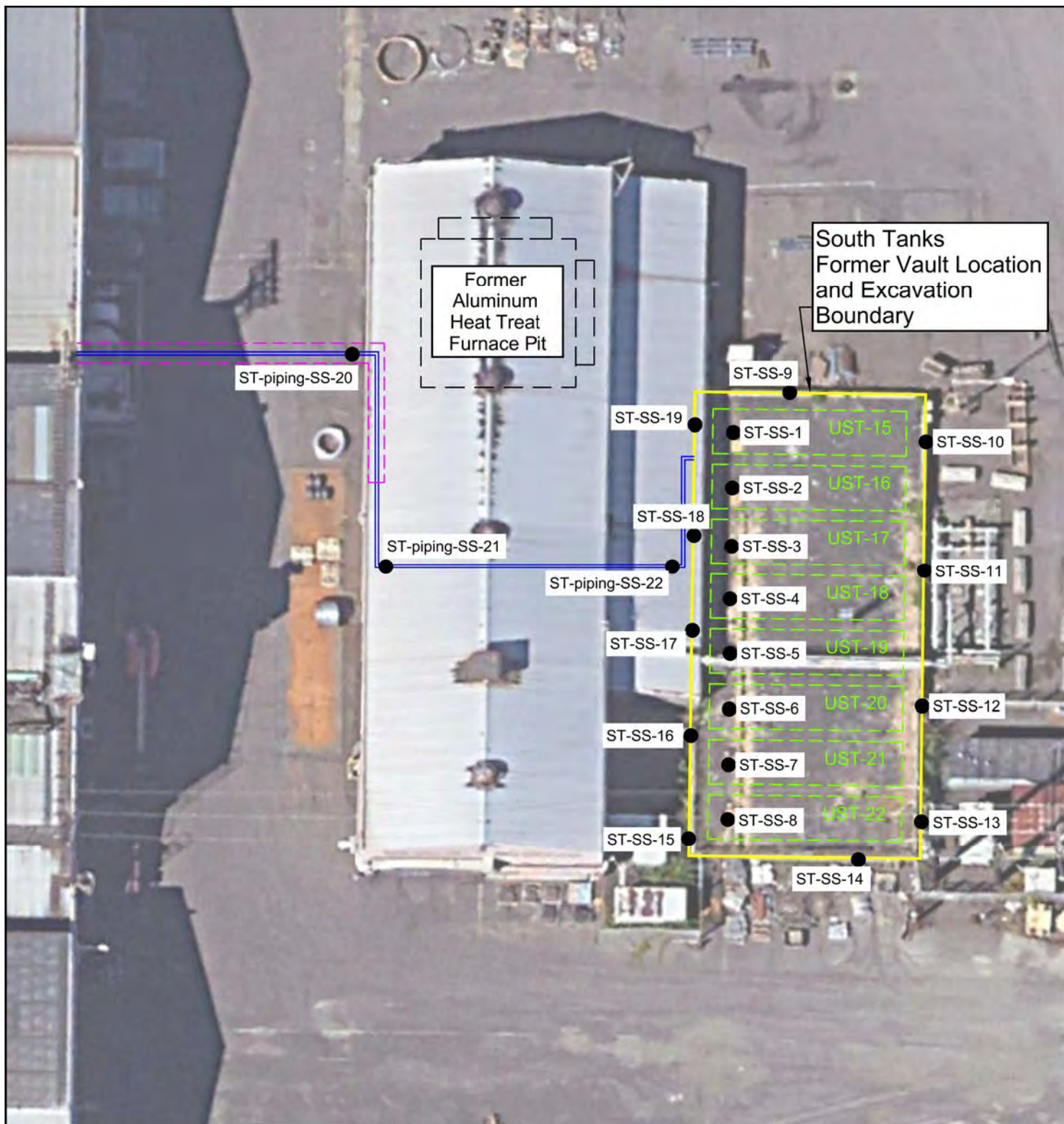
- Soil Sample Location and Designation
- Former Underground Storage Tank Location and Designation
- Former Product Piping Location



Scale in Feet



Background Images Source: Google Earth Pro 5/26/2018





**South Tanks
Sample Location Map**

Former Jorgensen Forge Facility 8531 E. Marginal Way S. Tukwila, Washington	02-05-2024	Figure 4
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Legend

- Soil Sample Location and Designation
- [Green dashed box] Former Underground Storage Tank Location and Designation
- [Pink dashed line] Former Utilidor
- [Blue line] Former Product Piping



Scale in Feet



Background Images Source: Google Earth Pro 5/26/2018

Table 1
Analytical Results Summary Table - GRO & DRO
 UST Site Assessment Soil Samples - North Tank Vault
 Former Jorgensen Forge Facility
 Tukwila, Washington

all values reported in units of mg/kg

Lab Report	Sample Date	Sample Location	Sample ID	GRO	DRO
2308-250	8/22/2023	North Tank Bottom	NT-SS-29-6.5-082223	4.9 U	57 U
			NT-SS-30-6.5-082223	5.8 U	58 U
			NT-SS-31-6.5-082223	80	32,000
			NT-SS-32-6.5-082223	5.3 U	60 U
			NT-SS-33-6.5-082223	5.7 U	61 U
			NT-SS-34-6.5-082223	280	10,800
			NT-SS-35-6.5-082224	6.5	6,600
			NT-SS-Dup-1-082223	6.5	14,000
2308-357	8/30/2023		NT-SS-28-6.5-083023	5.3 U	58 U
			NT-SS-27-6.5-083023	7.7 U	120
			NT-SS-26-6.5-083023	4.9 U	56
2308-315	8/28/2023		NT-SS-17-5.0-082823	480	225,000
			NT-SS-18-5.0-082823	180	23,500
			NT-SS-19-5.0-082824	6.2 U	66 U
			NT-SS-16-5.0-082825	6.0 U	60 U
			NT-SS-15-5.0-082826	110	1,120
2308-357	8/30/2023	North Tank Sidewalls	NT-SS-20-5.0-083023	5.2 U	96
			NT-SS-21-5.0-083023	5.1 U	59 U
			NT-SS-22-5.0-083024	5.3 U	59 U
			NT-SS-23-5.0-083024	6.2 U	65 U
			NT-SS-14-5.0-083025	450	37,900
			NT-SS-13-5.0-083025	100	51,900
			NT-SS-12-5.0-083026	5.6 U	56 U
			NT-SS-11-5.0-083026	7.2 U	69 U
2308-250	8/21/2023	North Tank Piping	NT-piping-SS-24-2.0-082123	6.4 U	8,900
			NT-piping-SS-25-2.0-082123	5.2 U	399
			NT-piping-SS-26-2.0-082123	4.8 U	120

Notes:

1. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory practical quantitation limit (PQL)
2. DRO concentrations include the sum of diesel-range and lube oil-range hydrocarbons. If neither diesel-range or lube oil-range hydrocarbons were reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag
3. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Abbreviations

GRO = Gasoline-range organics
 DRO = diesel-range organics
 mg/kg = milligrams per kilogram

Analytical Methods

GRO by Method NWTPH-Gx
 DRO by Method NWTPH-Dx

Table 2
Analytical Results Summary Table - GRO & DRO
 UST Site Assessment Soil Samples - South Tank Vault
 Former Jorgensen Forge Facility
 Tukwila, Washington

all values reported in units of mg/kg

Lab Report	Sample Date	Sample Location	Sample ID	GRO	DRO
2308-250	8/22/2023	South Tank Bottom	ST-SS-8-8.5-082223	1,300	5,300
			ST-SS-7-8.5-082223	5.7 U	3,400
			ST-SS-6-8.5-082223	5.6 U	57
			ST-SS-1-8.5-082223	6.7 U	67 U
			ST-SS-2-8.5-082223	7.3 U	149
			ST-SS-Dup-2-082223	6.4 U	58
2308-357	8/30/2023	South Tank Bottom	ST-SS-3-8.5-083023	56 U	330
			ST-SS-4-8.5-083023	5.8 U	130
			ST-SS-5-8.5-083023	120 U	430
		South Tank Sidewalls	ST-SS-15-6.5-083023	280 U	15,000
			ST-SS-16-6.5-083023	230 U	6,000
			ST-SS-17-6.5-083023	170 U	18,000
			ST-SS-18-6.5-083023	78 U	2,900
			ST-SS-19-6.5-083023	4.7 U	56 U
			ST-SS-9-6.5-083023	5.7 U	66 U
			ST-SS-10-6.5-083023	7.1 U	73 U
			ST-SS-11-6.5-083023	7.1 U	38
			ST-SS-12-6.5-083023	6.6 U	63 U
			ST-SS-13-6.5-083023	8.6 U	80 U
			ST-SS-14-6.5-083023	6.8 U	69 U
2310-177	10/13/2023	South Tank Piping	ST-piping-SS-20-6.5	220	4,260
			ST-piping-SS-21-2.0	4.8 U	380
			ST-piping-SS-22-2.0	4.0 U	190

Notes:

1. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory practical quantitation limit (PQL)
2. DRO concentrations include the sum of diesel-range and lube oil-range hydrocarbons. If neither diesel-range or lube oil-range hydrocarbons were reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag
3. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Abbreviations

GRO = Gasoline-range organics
 DRO = diesel-range organics
 mg/kg = milligrams per kilogram

Analytical Methods

GRO by Method NWTPH-Gx
 DRO by Method NWTPH-Dx

Table 3
Analytical Results Summary Table - Toluene, Ethylbenzene, & Xylenes
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

Location	Sample ID	Toluene	Ethylbenzene	Xylenes
North Tank Bottom	NT-SS-31-6.5-082223	0.0041 U	0.00082 U	0.0084
	NT-SS-34-6.5-082223	0.26 U	0.051 U	0.20
	NT-SS-35-6.5-082224	0.0044 U	0.0021	0.057
	T-SS-Dup-1-082223	0.0048 U	0.0012	0.028
North Tank Sidewalls	NT-SS-17-5.0-082823	0.25 U	0.065	0.54
	NT-SS-18-5.0-082823	0.0047 U	0.15	0.39 J
	NT-SS-13-5.0-083025	0.0046 U	0.00092 U	0.0163
North Tank Piping	NT-piping-SS-24-2.0-082123	0.0058 U	0.0012 U	0.0023 U
South Tank Bottom	ST-SS-8-8.5-082223	0.33	0.80	6.5
	ST-SS-7-8.5-082223	0.0047 U	0.00094 U	0.0096
South Tank Sidewalls	ST-SS-15-6.5-083023	0.21 U	0.085	0.73
	ST-SS-17-6.5-083023	0.22 U	0.044 U	0.087 U
South Tank Piping	ST-piping-SS-20-6.5	0.40	0.46	3.0
	ST-piping-SS-21-2.0	0.0041 U	0.00082 U	0.0012
	ST-piping-SS-22-2.0	0.0037 U	0.00074 U	0.0015 U

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "J" denotes the reported concentration is an estimate
4. Xylenes concentrations include the sum of m,p-xylene and o-xylene. If neither compound was reported in a sample at a concentration greater than the PQL, the greatest PQL value is listed with a "U" flag.

Abbreviations

mg/kg = milligrams per kilogram

Analytical Methods

VOCs by EPA Method 8260D

Samples analyzed by Onsite Environmental, Inc., of Redmond Washington

Table 4
Analytical Results Summary Table - cPAHs
 UST Site Assessment Soil Samples
 Former Jorgensen Forge Facility
 Tukwila, Washington

all values reported in units of mg/kg

Sample ID	<i>Benzo[a]anthracene</i>	<i>Chrysene</i>	<i>Benzo[b]fluoranthene</i>	<i>Benzo[k]fluoranthene</i>	<i>Benzo[a]pyrene</i>	<i>Indeno[1,2,3-cd]pyrene</i>	<i>Dibenzo[a,h]anthracene</i>	TEC
TEF	0.1	0.01	0.1	0.1	1	0.1	0.1	
NT-SS-31-6.5-082223	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--
NT-SS-34-6.5-082223	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--
NT-SS-35-6.5-082224	0.0078 U	0.0098	0.0097 U	0.0078 U	0.010 U	0.0088 U	0.0078 U	--
T-SS-Dup-1-082223	0.036	0.052	0.093 U	0.015 U	0.10 U	0.026 U	0.015 U	0.004
NT-SS-17-5.0-082823	0.026	0.072	0.041 U	0.020 U	0.033 U	0.031 U	0.036 U	0.003
NT-SS-18-5.0-082823	0.0028	0.0062	0.0045 U	0.0021 U	0.013 U	0.0054 U	0.0022 U	0.000
NT-SS-13-5.0-083025	0.13	0.15	0.097	0.036 U	0.14	0.080	0.036 U	0.172
NT-piping-SS-24-2.0-082123	0.033 UJ	0.038 J	0.056 J	0.062 J	0.033 UJ	0.033 UJ	0.033 UJ	0.012
ST-SS-8-8.5-082223	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--
ST-SS-7-8.5-082223	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--
ST-SS-15-6.5-083023	0.035 U	0.16	0.035 U	0.035 U	0.042	0.035 U	0.035 U	0.044
ST-SS-17-6.5-083023	0.13	0.38	0.046	0.035 U	0.074	0.035 U	0.035 U	0.095
ST-piping-SS-20-6.5	0.030 U	0.071	0.045	0.030 U	0.034	0.030 U	0.030 U	0.039
ST-piping-SS-21-2.0	0.11	0.13	0.18	0.056	0.13	0.16	0.031	0.185
ST-piping-SS-22-2.0	0.57	0.59	0.68	0.23	0.63	0.37	0.088	0.830

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "J" denotes the reported concentration is an estimate
4. "--" indicates a TEC value was not calculated, because none of the individual cPAH compounds were reported at a concentration greater than or equal to the PQL.

Abbreviations

cPAHs = Carcinogenic Polyaromatic Hydrocarbons
 mg/kg = milligrams per kilogram
 TEF = Toxic Equivalent Factor, (WAC 173-340-708)
 TEC = Toxic Equivalent Concentration of benzo(a)pyrene

Analytical Methods

cPAHs by EPA 8270E/SIM
 Analyzed at Onsite Environmental, Redmond, Washington

Table 5
Analytical Results Summary Table - Total Metals
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
NT-SS-31-6.5	39	26	0.58 U	7.2	17	5.8 U	12	19
NT-SS-34-6.5	12 U	24	0.60 U	7.0	11	6.0 U	8.1	21
NT-SS-35-6.5	12 U	27	0.59 U	8.7	12	5.9 U	8.4	25
T-SS-Dup-1	12 U	24	0.59 U	7.8	11	5.9 U	7.7	22
NT-SS-17-5.0	12 U	34	0.59 U	9.3	20	12	18	59
NT-SS-18-5.0	12 U	28	0.62 U	7.7	17	6.2 U	9.4	20
NT-SS-13-5.0	11 U	27	0.54 U	7.9	21	5.4 U	11	23
NT-piping-SS-24-2.0	27	65	0.61 U	100	150	140	910	190
ST-SS-8-8.5	13 U	28	0.63 U	7.9	10	6.3 U	7.6	23
ST-SS-7-8.5	12 U	23	0.62 U	7.7	8.1	6.2 U	6.5	19
ST-SS-15-6.5	11 U	21	0.53 U	7.1	7.8	11	7.5	20
ST-SS-17-6.5	11 U	25	0.53 U	8.3	8.1	5.3 U	8.0	22
ST-piping-SS-20-6.5	31	82	0.85	25	67	49	94	280
ST-piping-SS-21-2.0	11 U	41	0.55 U	55	56	18	64	44
ST-piping-SS-22-2.0	11 U	33	0.55 U	20	30	18	58	43

Notes

1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.

Abbreviations

mg/kg = milligrams per kilogram

Analytical Methods

arsenic, barium, cadmium, chromium, lead, selenium, and silver by EPA Method 6010D

mercury by EPA Method 7471B

Analyzed at Onsite Environmental, Redmond, Washington

Table 6
Analytical Results Summary Table - PCBs
UST Site Assessment Soil Samples
Former Jorgensen Forge Facility
Tukwila, Washington

all values reported in units of mg/kg

Sample Name	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total PCBs
NT-SS-31-6.5	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	--
NT-SS-34-6.5	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	--
NT-SS-35-6.5	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--
T-SS-Dup-1	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--
NT-SS-17-5.0	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16	0.11	0.059 U	0.059 U	0.27
NT-SS-18-5.0	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.084	0.062 U	0.062 U	0.062 U	0.084
NT-SS-13-5.0	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.13	0.054 U	0.054 U	0.068	0.20
NT-piping-SS-24-2.0	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.29	0.23	0.061 U	0.061 U	0.52
ST-SS-8-8.5	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	--
ST-SS-7-8.5	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	--
ST-SS-15-6.5	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	--
ST-SS-17-6.5	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	--
ST-piping-SS-20-6.5	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	--
ST-piping-SS-21-2.0	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	--
ST-piping-SS-22-2.0	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	--

Notes

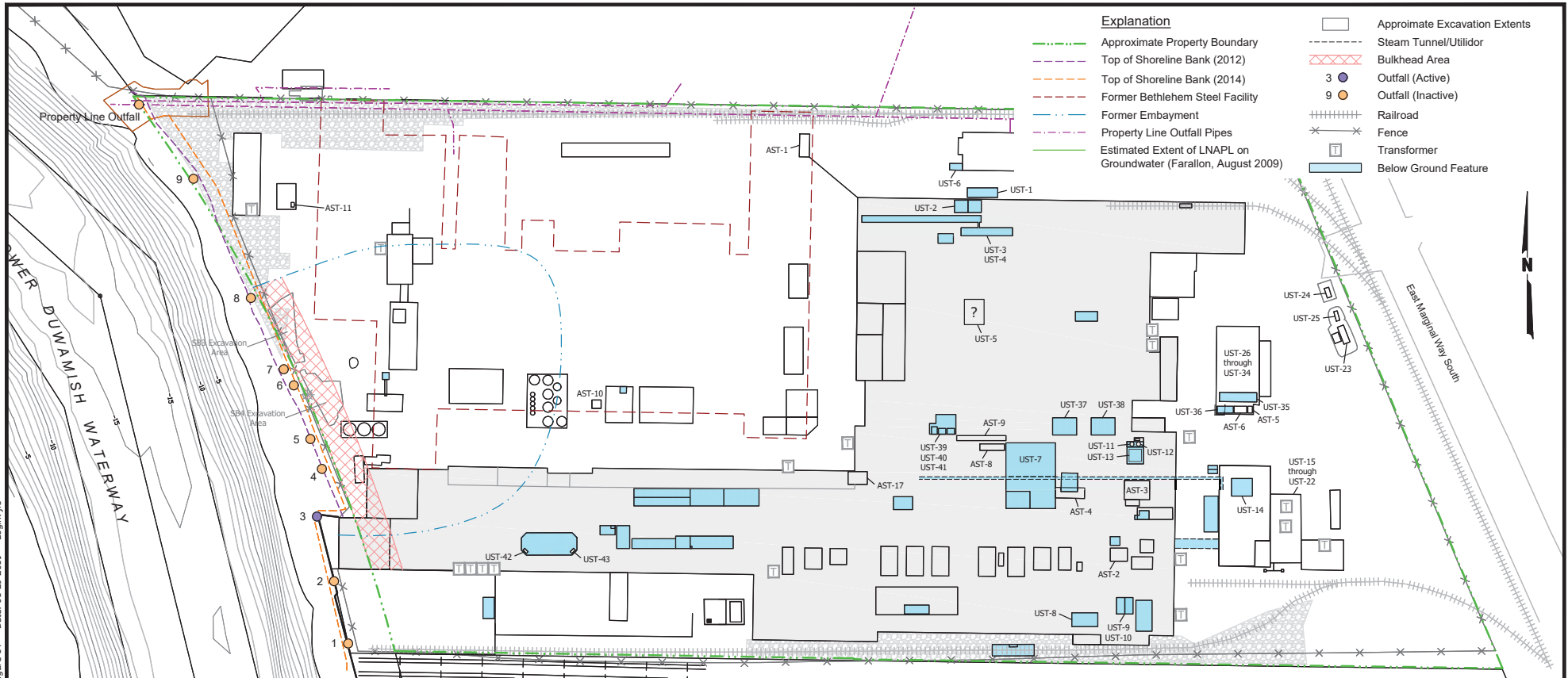
1. Analytes are only shown if they were reported in at least one soil sample at a concentration greater than or equal to the laboratory practical quantitation limit (PQL).
2. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL.
3. "--" indicates none of the individual PCB aroclors were reported at a concentration greater than or equal to the PQL.

Abbreviations

PCB = polychlorinated biphenyl
UST = Underground Storage Tank
mg/kg = milligrams per kilogram

Analytical Methods

PCBs by EPA Method 8082
Analyzed at Onsite Environmental, Redmond, Washington



Tank ID	Description	Containment	Capacity (Gallons)
UST-1	Hollowbore 59/60 Lathes Cutting Oil Holding Tank	V	11,000
UST-2	Hollowbore 59/60 Horizontal Lathes Intermediate Cutting Oil Tank	V	240
UST-3	Hollowbore 58 Horizontal Lathe Clean Cutting Oil Tank	V	5,500
UST-4	Hollowbore 58 Horizontal Lathe Dirty Cutting Oil Tank	V	5,000
UST-5	Tacchi Cutting Oil Tank	V	2,500
UST-6	Office Building Heating Oil UST	G	600
UST-7	5,000-Ton Press Hydraulic Oil Tank	V	4,000
UST-8	Ring Expander Hydraulic Oil Tank	V	300
UST-9	Ring Mill Coolant Tank	V	500
UST-10	Ring Mill Coolant Tank	V	500
UST-11	Quench Tank 5 (Q5)	V	-
UST-12	Quench Tank 6 (Q6)	V	5,000
UST-13	Quench Tank 7 (Q7)	V	-
UST-14	Quench Tank 8 (Q8)	V	-
UST-15 through UST-22	Decommissioned Diesel Storage Area Tanks (8 tanks)	V	96,000
UST-23	Former Regulated Gasoline UST	G	8,000
UST-24	Former Unregulated UST	G	2,000
UST-25	Former Unregulated UST	G	1,000
UST-26 through UST-35	Decommissioned Oil Storage Area Tanks (10 tanks)	V	150,000

UST-36	Waste Oil Tank	V	2,000
UST-37	West Craven Lathe Hydraulic Oil Tank	V	30
UST-38	East Craven Lathe Hydraulic Oil Tank	V	100
UST-39	Quench Tank 1 (Q1)	V	13,000
UST-40	Quench Tank 2 (Q2)	V	13,000
UST-41	Quench Tank 3 (Q3)	V	-
UST-42 and UST-43	Arc Furnace Hydraulic Oil Tank	V	500
UST-43	Arc Furnace Hydraulic Oil Tank	V	500
AST-1	Former Cutting Oil Supply Tank	C	4,000
AST-2	660-Ton Press Hydraulic Oil Tank	C	700
AST-3	1,250-Ton Press Hydraulic Oil Tank	C	1,000
AST-4	L and F Press Hydraulic Oil Tank	C	700
AST-5	Used Oil Centrifuge	C	1,200
AST-6	Clean Hydraulic Oil Tank	C	6,000
AST-7	2,500 Ton Press Hydraulic Oil Tank	C	1,500
AST-8	Quench Tank 4 (Q4)	C	-
AST-9	Quench Tank 9 (Q9)	C	-
AST-10	Former Gasoline AST	C	300
AST-11	Diesel Fuel Tank	C	300

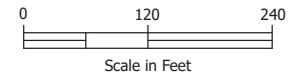
ABBREVIATIONS

AST = Aboveground Storage Tank
 UST = Underground Storage Tank
 V = Within Vault
 C = Within Containment
 G = Directly within Soil
 - = Unknown

DRAFT

NOTE

Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., Dated Jan 24, 2012.



Jorgensen Forge Facility
 8531 East Marginal Way S
 Tukwila, Washington

ASTs AND USTs

January 2019

21-1-12596-010

SHANNON & WILSON, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 14



30-DAY NOTICE

FOR UNDERGROUND STORAGE TANK SYSTEMS

This form provides Ecology 30-days' advanced notice for projects, as required by Chapter 173-360A WAC. Instructions are on the back page.

NWRO
UST ID #: 60163
COUNTY: King
Date: JUN 01 2023

Washington State Department of Ecology
UST Cleanup Program

Please ✓ the appropriate box: ☐ Intent to Install

☒ Intent to Close

☐ Change-in-Service

I. SITE INFORMATION			II. OWNER/OPERATOR INFORMATION		
Tag or UBI # (if applicable): 604 027 650			Owner/Operator Name: Star Forge		
UST ID # (if applicable): 6163			Business Name: Star Forge		
Site Name: Former Jorgensen Forge			Mailing Address: 8531 E. Marginal Way S.		
Site Address: 8531 E. Marginal Way S.			City: Tukwila State: WA Zip: 98108		
City: Tukwila, WA			Phone: Wayne Turk; 206-255-8177		
Phone: Wayne Turk; 206-255-8177			Email: wturk@jorgensenforge.com		
III. CERTIFIED SERVICE PROVIDER(S)					
Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.					
Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.					
1) ☐ Installer ☒ Decommissioner ☐ Site Assessor					
Company Name: Construction Group International			Certification Type: UST Decommissioner		
Service Provider Name: Brad Reilly			Cert. No.: 8289423 Exp. Date: 3/4/2024		
Provider Phone: 425-487-2618			Provider Email: markm@cgius.net		
2) ☐ Installer ☐ Decommissioner ☒ Site Assessor (Mark Marcell, CGI Project Mgr)					
Company Name: DH Environmental, Inc.			Certification Type: WA State Site Assessor		
Service Provider Name: Nathan Moxley			Cert. No.: WA LHG 3024 Exp. Date: 6/7/2024		
Provider Phone: 509-332-9281			Provider Email: nathan.moxley@dhenviro.com		
IV. TANK AND/OR PIPING INFORMATION					
TANK ID	TANK CAPACITY	SUBSTANCE STORED	PIPING INSTALLATION OR REPLACEMENT ONLY (Y/N)	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS
					18 USTs identified on pg 3-6 of attached UST Addendum form. Tanks are empty, and work is approved by Ecology Agreed Order No. DE 21034. Expected start date pending permits from City of Tukwila. Start date will be confirmed 3-days before starting as required by WAC 173-360A-0810(1), and we will keep your office apprised of any scheduling updates.

30-DAY NOTICE

FOR UNDERGROUND STORAGE TANK SYSTEMS

GENERAL INSTRUCTIONS

Under WAC 173-360A-0300, 173-360A-0810 and 173-360A-0820, owners and/or operators are required to notify the Department of Ecology (Ecology) **at least 30 days prior** to beginning underground storage tank (UST) and/or piping installation, decommissioning, or change-in-service projects by mailing this notice to the address below. A separate form must be used for each project type (e.g. install, removal). Once this form is received by Ecology, it is date-stamped and returned to the owner/operator listed on the form. Installation and decommissioning projects cannot begin within the first 30 days after the date stamped on this form unless the wait-period has been waived by a regional Ecology UST inspector. If a project cannot meet the deadlines described below, an additional 30-Day Notice may be required.

Department of Ecology
Underground Storage Tank Section
PO Box 47655
Olympia, WA 98504-7655

SITE AND OWNER/OPERATOR INFORMATION

Fill in the site/owner information completely. The contact person listed on this form must confirm the exact date an installation or decommissioning project will begin by contacting the regional UST inspector **at least 3 business days** before proceeding.

INSTALLATION/REPLACEMENT OF TANK AND/OR PIPING

Installation projects must begin within 90 days of the date stamped on this notice. Complete the Tank Information section by assigning Tank ID numbers that have not previously been used at the facility. Once processed, this form allows a one-time drop of product for UST system testing purposes only. The fuel drop is not required to occur within the 90-day period. Once your tank(s) store more than one inch of product, leak detection equipment and monitoring must be in place.

To receive additional deliveries and operate the new tanks/piping, you must submit the Business License application, UST Addendum, and the tank/piping Manufacturer's Installation Checklists to the Department of Revenue (DOR) **within 30 days** of completing the installation. This activates the mailing of your Business License with tank endorsement(s) from DOR and the facility compliance tag from Ecology.

If only piping is being installed or replaced piping, the ICC-certified installer must certify the installation by completing the Retrofit/Repair Checklist with the Manufacturer's Installation Checklist and submitting it to the owner/operator. The form packet must be submitted by the owner/operator to Ecology **within 30 days** of completing the piping installation.

PERMANENT CLOSURE OF TANK AND/OR PIPING

Decommissioning projects must be completed within 90 days after the date stamped on this returned notice. Complete the Tank Information section using Tank ID numbers listed on the Business License. Use the Comments box to include additional information, such as the date when product was removed from both the piping and the tank to less than one inch.

Contact your local fire marshal and planning department prior to tank closure to procure any permits required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC may also apply.

A site assessment is required at the time of closure. If contamination is not discovered, a site assessment report must be submitted to the above address **within 30 days**. If contamination is discovered or confirmed, it must be reported to the appropriate Ecology regional office **within 24 hours** and a site characterization report must be submitted to the above address **within 90 days**.

The following are some examples of tanks that are exempt from the UST regulations.

- ❖ Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- ❖ Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- ❖ Tanks with a capacity of 110 gallons or less.
- ❖ Emergency overflow tanks, catch basins, or sumps.

If you need this document in a format for the visually impaired, call Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with speech disability, call (877) 833-6341.

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	First Tank	Second Tank	Third Tank	Fourth Tank	Fifth Tank
A Tank name	UST-15	UST-16	UST-17	UST-18	UST-19
B Tank installation date	~ 1942	~ 1942	~ 1942	~ 1942	~ 1942
D Tank material	A	A	A	A	A
E1 Tank construction	A	A	A	A	A
E2 Manifolded tank	A	A	A	A	A
F Tank release detection	O	O	O	O	O
H Tank corrosion protection	O	O	O	O	O
I Spill prevention	O	O	O	O	O
J Overfill protection	O	O	O	O	O
K2 Piping Installation Date	~ 1942	~ 1942	~ 1942	~ 1942	~ 1942
K1 Piping material	A	A	A	A	A
L Piping construction	A	A	A	A	A
M1 Piping release detection (primary)	O	O	O	O	O
M2 Piping release detection (secondary)	J	J	J	J	J
M3 Turbine sump construction	O	O	O	O	O
O1 Piping corrosion protection	O	O	O	O	O
O2 Steel flex connector at tank	J	J	J	J	J
O3 Steel flex connector at dispenser/pump	J	J	J	J	J
P Pumping system	O	O	O	O	O
Compartments	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Q Substance stored	D	D	D	D	D
R Substance use	B	B	B	B	B
S Compartment capacity	12,000	12,000	12,000	12,000	12,000

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	6th Tank	7th Tank	8th Tank	9th Tank	10th Tank								
A Tank name	UST-20	UST-21	UST-22	UST-26	UST-27								
B Tank installation date	~ 1942	~ 1942	~ 1942	~ 1975	~ 1975								
D Tank material	A	A	A	A	A								
E1 Tank construction	A	A	A	A	A								
E2 Manifolded tank	A	A	A	A	A								
F Tank release detection	O	O	O	O	O								
H Tank corrosion protection	O	O	O	O	O								
I Spill prevention	O	O	O	O	O								
J Overfill protection	O	O	O	O	O								
K2 Piping Installation Date	~ 1942	~ 1942	~ 1942	~ 1975	~ 1975								
K1 Piping material	A	A	A	A	A								
L Piping construction	A	A	A	A	A								
M1 Piping release detection (primary)	O	O	O	O	O								
M2 Piping release detection (secondary)	J	J	J	J	J								
M3 Turbine sump construction	O	O	O	O	O								
O1 Piping corrosion protection	O	O	O	O	O								
O2 Steel flex connector at tank	J	J	J	J	J								
O3 Steel flex connector at dispenser/pump	J	J	J	J	J								
P Pumping system	O	O	O	O	O								
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	
Q Substance stored	D			D			D			O			O
R Substance use	B			B			B			G			G
S Compartment capacity	12,000			12,000			12,000			13,500			13,500

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	11th Tank	12th Tank	13th Tank	14th Tank	15th Tank
A Tank name	UST-28	UST-29	UST-30	UST-31	UST-32
B Tank installation date	~1975	~1975	~1975	~1975	~1975
D Tank material	A	A	A	A	A
E1 Tank construction	A	A	A	A	A
E2 Manifolded tank	A	A	A	A	A
F Tank release detection	O	O	O	O	O
H Tank corrosion protection	O	O	O	O	O
I Spill prevention	O	O	O	O	O
J Overfill protection	O	O	O	O	O
K2 Piping Installation Date	~1975	~1975	~1975	~1975	~1975
K1 Piping material	A	A	A	A	A
L Piping construction	A	A	A	A	A
M1 Piping release detection (primary)	O	O	O	O	O
M2 Piping release detection (secondary)	J	J	J	J	J
M3 Turbine sump construction	O	O	O	O	O
O1 Piping corrosion protection	O	O	O	O	O
O2 Steel flex connector at tank	J	J	J	J	J
O3 Steel flex connector at dispenser/pump	J	J	J	J	J
P Pumping system	O	O	O	O	O
Compartments	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Q Substance stored	O	O	O	O	O
R Substance use	G	G	G	G	G
S Compartment capacity	13,500	13,500	13,500	13,500	13,500

UST number
604 027 650

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	16th Tank	17th Tank	18th Tank	19th Tank	20th Tank
A Tank name	UST-33	UST-34	UST-35		
B Tank installation date	~1975	~1975	~1975		
D Tank material	A	A	A		
E1 Tank construction	A	A	A		
E2 Manifolded tank	A		A		
F Tank release detection	O	O	O		
H Tank corrosion protection	O	O	O		
I Spill prevention	O	O	O		
J Overfill protection	O	O			
K2 Piping Installation Date	~1975	~1975	~1975		
K1 Piping material	A	A	A		
L Piping construction	A	A	A		
M1 Piping release detection (primary)	O	O	O		
M2 Piping release detection (secondary)	J	J	J		
M3 Turbine sump construction	O	O	O		
O1 Piping corrosion protection	O	O	O		
O2 Steel flex connector at tank	J	J	J		
O3 Steel flex connector at dispenser/pump	J	J	J		
P Pumping system	O	O	O		
Compartments	1	2	3	1	2
Q Substance stored	O		O	O	
R Substance use	G		G	G	
S Compartment capacity	13,500		13,500	13,500	



City of Tukwila

Department of Community Development

6300 Southcenter Boulevard, Suite #100

Tukwila, Washington 98188

Fire Marshal's Office

Web site: <http://www.TukwilaWA.gov/departments/fire-marshals-office>

FIRE PERMIT

FIRE TANK - TANK REMOVAL OR ABANDONMENT

PERMIT NUMBER:F23-0135

Parcel No:	0001600023	Permit Number:	F23-0135
Address:	8531 E MARGINAL WAY S	Issue Date:	5/26/2023
		Permit Expires On:	11/22/2023

Project Name: Star Forge Tank Removal

Owner:

Name: STAR FORGE LLC

Address: 8531 E MARGINAL WAY S TUKWILA
WA 98108

Contact Person:

Name: Wayne Turk

Phone: (206) 762-1100

Address: 8531 E. Marginal Way S. Tukwila WA
98108

Contractor:

Name: CONST GRP INTERNATIONAL LLC

Phone: (425) 487-2618

Address: 19407 144TH AVE NE BLDG D
WOODINVILLEWA 98072

License No: CONSTGI953NA

Expiration Date: 8/10/2023

DESCRIPTION OF WORK:

Decommission, by removal, 18 USTs and 2 ASTs

Project Valuation:	\$200,000.00	Fees Collected:	\$8,400.00
--------------------	--------------	-----------------	------------

Type of Fire Protection: Sprinklers:
Fire Alarm:

Type of Construction:
Electrical Service Provided by: Tukwila

Occupancy per IBC:
Water District: Tukwila
Sewer District: Tukwila

Fees Collected:

Electrical Service Provided by:
Water District:
Sewer District:

Current Codes adopted by the City of Tukwila:

International Fire Code Edition:	2018		
International Building Code Edition:	2018	National Electrical Code:	2020
International Residential Code Edition:	2018	WA Cities Electrical Code:	2020
International Mechanical Code Edition:	2018	WAC 296-46B:	2020
Uniform Plumbing Code Edition:	2018	WA State Energy Code:	2018
International Fuel Gas Code:	2018		

All provisions of law and ordinances governing this work will be complied with, whether specified herein or not.

The granting of this permit does not presume to give authority to violate or cancel the provisions of any other state or local laws regulating construction or the performance of work.

This permit shall become null and void if the work is not commenced within 180 days for the date of issuance, or if the work is suspended or abandoned for a period of 180 days from the last inspection.

PERMIT CONDITIONS:

1: FIRE CONDITIONS

- A site investigation/assessment is required prior to taking a tank permanently out of service.
- TANKS MAY BE REMOVED ONLY AFTER FIRE DEPARTMENT INSPECTION.
- Two (2) 20 BC portable fire extinguishers are to be on site within 50 ft. of the operation.
- Work area shall be cordoned off or be enclosed in a fenced yard.
- "No Smoking" signs must be posted in readily visible locations.
- Remove all flammable or combustible liquids from tank and from connecting lines.
- Tanks shall be inerted and must be certified gas free by a Marine Chemist or Petroleum Industry Safety Engineer regularly engaged in that business, prior to removal.
- All exterior above-grade fill and vent piping shall be permanently removed.
- Tanks shall be disposed of in accordance with federal, state and local regulations.
- Call twenty-four (24) hours prior to removal to arrange the required fire department inspections.

PERMIT INSPECTIONS REQUIRED

TANK REMOVAL FINAL [____]

Comment _____ Date _____

International Fire Code Edition:
International Building Code Edition:
International Residential Code Edition:
International Mechanical Code Edition:
Uniform Plumbing Code Edition:
International Fuel Gas Code:

2018
2018
2018
2018
2018
2018

National Electrical Code:
WA Cities Electrical Code:
WAC 296-46B:
WA State Energy Code:

2020
2020
2020
2018

All provisions of law and ordinances governing this work will be complied with, whether specified herein or not.

The granting of this permit does not presume to give authority to violate or cancel the provisions of any other state or local laws regulating construction or the performance of work.

This permit shall become null and void if the work is not commenced within 180 days for the date of issuance, or if the work is suspended or abandoned for a period of 180 days from the last inspection.

copy Earl Bush (COT)

PERMIT CONDITIONS:

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- All exterior above-grade fill and vent piping shall be permanently removed.
- Tanks shall be disposed of in accordance with federal, state and local regulations.
- Call twenty-four (24) hours prior to removal to arrange the required fire department inspections.

PERMIT INSPECTIONS REQUIRED

TANK REMOVAL FINAL 

Comment Fire final Passed Date 8/17/23

Earl Bush PSRFA

Earl Bush

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, WA 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

MARINE VACUUM SERVICE, INC. TANK WASH CERTIFICATE

Tank Size: 10 X 15,000 Gallon Tanks

Last Contents: DIESEL

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been cleaned in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.

M.V.S. Representative: 

Date: AUGUST 9 – 14, 2024

***** This certificate does not certify the tank or space for hot work.

DBE # D4M1302341

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # D4M1302341

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, WA 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

MARINE VACUUM SERVICE, INC. TANK WASH CERTIFICATE

Tank Size: 8 X 12,000 Gallon Tanks

Last Contents: DIESEL

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been cleaned in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.

M.V.S. Representative: 

Date: AUGUST 9 – 14, 2024

***** This certificate does not certify the tank or space for hot work.

DBE # D4M1302341

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # D4M1302341

Appendix E - Photo Log
UST Decommissioning and Site Assessment Report
Former Jorgensen Forge Property



Photo 1: North Tank Vault, exposing UST-26 in preparation for removal. View to the west.



Photo 2: North Tank Vault, exposing UST-28 in preparation for removal. View to the west.



Photo 3: North Tank Vault, last two tanks prepared for removal. View to the south southwest.



Photo 4: North Tank Vault, tanks staged for transport. The tank fragments on the left side were tanks previously filled with sand, which were cut open to empty. View to the north.



Photo 5: North Tank Vault, loading a tank for recycling. View to the southwest.



Photo 6: North Tank Vault, emptied of tanks and backfill, prior to removal of the concrete vault. View to the northwest.



Photo 7: North Tank Vault, product piping removal. View to the north northwest.



Photo 8: North Tank Vault, southernmost end of the product piping. The piping had been cut just inside the foundation wall of the aluminum building. A cap was still present on the end of the pipe.



Photo 9: North Tank Vault, removal of the concrete vault structure. View to the north.



Photo 10: North Tank Vault, backfilling the tank excavation. View to the west northwest.



Photo 11: North Tank Vault, following final paving and site restoration. View to the south southwest.



Photo 12: South Tank Vault, removal of UST-15. View to the southwest.



Photo 13: South Tank Vault, tank prepared for removal. View to the west.



Photo 14: South Tank Vault, tank staged for transport. Note the condition of the tanks from the South Tank Vault in comparison to those from the North Tank Vault. View to the west.



Photo 15: South Tank Vault, loading a tank for recycling. View to the west.



Photo 16: South Tank Vault, example of a pinhole caused by corrosion. These were visible on multiple tanks.



Photo 17: South Tank Vault, emptied of tanks and backfill, prior to removal of the concrete vault. View to the south southwest.



Photo 18: South Tank Vault, backfilling the excavation. View to the south southwest.



Photo 19: South Tank Vault, single product line visible entering the foundation underneath of the former Aluminum Building, along with a small electrical conduit. View to the north northeast.



Photo 20: South Tank Vault, product line running from left to right (north to south), where it joins two other lines that used to stub up through the concrete slab floor. Those lines appeared to have been cut and bent at some point in the past. View to the east.



Photo 21: South Tank Vault, product piping running north towards a utilidor. View to the north.



Photo 22: South Tank Vault, product piping in the utilidor following removal of the concrete top. Note there are more pipes visible in the utilidor than were visible running towards the former tanks. Several of the pipes had been cut and/or capped at some point in the past. View to the south southwest.



Photo 23: South Tank Vault, product piping in the utilidor following removal of the concrete top. Note there are more pipes visible in the utilidor than were visible running towards the former tanks. Several of the pipes had been cut and/or capped at some point in the past. View to the south southwest.



Photo 24: South Tank Vault, following final paving and site restoration. View to the south.



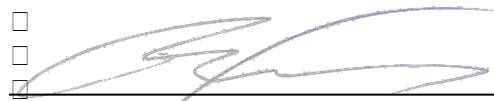
September 6 , 2023
ECI Project No.: 0520-40

Underground Storage Tank Decommissioning Certification

This is a statement of Underground Storage Tank Decommissioning provided by EcoCon, Inc. (ECI). ECI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). Following Puget Sound Regional Fire Department certification, the USTs were excavated and transported off site and disposed at a local recycling facility.

Project Client: CGI, Inc.
Project Name: Jorgensen Forge
Project Address: 8531 E. Marginal Way S, Tukwila, WA 98108
Type of Decommissioning: Excavation and removal from sub-surface
UST Installation Date: Unknown
UST Decommissioning Date: August 14, 2023
Permit Issuance Date: May 26, 2023
UST(s) Total Gallons: 10-13,500g Heating oil
UST(s) Construction: Steel Single Wall Construction
Tank Numbers: 26, 27, 28, 29,30, 31, 32, 33, 34, 35

Certified UST Decommissioner: Brad Reilly
Certification Number: 8289423– Exp: 03/04/2024

☐
☐
☐
☒ 

Brad N. Reilly
☐
☐

September 6, 2023

Date



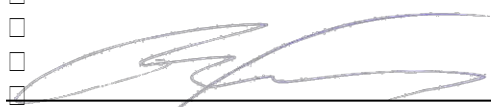
September 6 , 2023
ECI Project No.: 0520-40

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Permit Issuance Date: May 26, 2023
UST(s) Total Gallons: 8-12,000g Heating oil
UST(s) Construction: Steel Single Wall Construction
Tank Numbers: 15, 16, 17, 18, 19, 20, 21, 22

Certified UST Decommissioner: Brad Reilly
Certification Number: 8289423– Exp: 03/04/2024

☐
☐
☐
☒ 

Brad N. Reilly
☐
☐

September 6, 2023

Date



DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site – UST Vault Concrete

A. WASTE STREAM NAME AND GENERATION INFORMATION																																																																							
Waste Stream Name: Tank Vault Concrete																																																																							
Generation Process: Concrete Removal																																																																							
RCRA ID Number that waste will be managed under: NA	Total Quantity and/or Estimated Generation rate: ~ 300 cubic yards																																																																						
Other Descriptions (i.e. Shop, Project, Etc.):																																																																							
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																																																							
Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																																																					
Flashpoint: ☒ N/A ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☐ > 200 °F																																																																							
Characteristic ☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	PCB Content ☒ Not Detected ☐ [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	TCLP Metals ☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left; padding: 5px;">Total Metals</th> </tr> <tr> <th style="width: 30%;"></th> <th style="width: 30%; text-align: center;">mg/kg</th> <th style="width: 30%; text-align: center;">ug/kg</th> <th style="width: 30%; text-align: center;">mg/L</th> <th style="width: 30%; text-align: center;">ug/L</th> </tr> </thead> <tbody> <tr> <td>Arsenic:</td> <td></td> <td></td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Barium:</td> <td></td> <td>70</td> <td></td> <td>☐ ND</td> </tr> <tr> <td>Cadmium:</td> <td></td> <td></td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Chromium:</td> <td></td> <td>23</td> <td></td> <td>☐ ND</td> </tr> <tr> <td>Copper:</td> <td></td> <td>75</td> <td></td> <td>☐ ND</td> </tr> <tr> <td>Lead:</td> <td></td> <td></td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Mercury:</td> <td></td> <td></td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Nickel:</td> <td></td> <td>430</td> <td></td> <td>☐ ND</td> </tr> <tr> <td>Selenium:</td> <td></td> <td></td> <td></td> <td>☒ ND</td> </tr> <tr> <td>Silver:</td> <td></td> <td>5</td> <td></td> <td>☐ ND</td> </tr> <tr> <td>Zinc:</td> <td></td> <td>47</td> <td></td> <td>☐ ND</td> </tr> <tr> <td colspan="5" style="padding: 5px;">Comments:</td> </tr> </tbody> </table>	Total Metals				mg/kg	ug/kg	mg/L	ug/L	Arsenic:				☒ ND	Barium:		70		☐ ND	Cadmium:				☒ ND	Chromium:		23		☐ ND	Copper:		75		☐ ND	Lead:				☒ ND	Mercury:				☒ ND	Nickel:		430		☐ ND	Selenium:				☒ ND	Silver:		5		☐ ND	Zinc:		47		☐ ND	Comments:				
Total Metals																																																																							
	mg/kg	ug/kg	mg/L	ug/L																																																																			
Arsenic:				☒ ND																																																																			
Barium:		70		☐ ND																																																																			
Cadmium:				☒ ND																																																																			
Chromium:		23		☐ ND																																																																			
Copper:		75		☐ ND																																																																			
Lead:				☒ ND																																																																			
Mercury:				☒ ND																																																																			
Nickel:		430		☐ ND																																																																			
Selenium:				☒ ND																																																																			
Silver:		5		☐ ND																																																																			
Zinc:		47		☐ ND																																																																			
Comments:																																																																							
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																																																							
Constituent		Volume (Range %)																																																																					
Concrete		90-100																																																																					
Misc debris		0 - 10																																																																					



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100. The calculated equivalent concentration value was greater than 0.001%, resulting in an initial criteria waste designation of WT02. A follow-up fish bioassay was performed in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*, which resulted in zero mortality, which refutes the initial WT02 designation. **This waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2308-161 and 2308-161B)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solid

Designation Performed by: Nathan Moxley, LHG
Title: Senior Geologist

Date: 08-28-2023

Designation Reviewed by: Stacy Fox, CHMM
Title: Senior Project Manager

Date: 08-28-2023

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g **g**

[illegible]

[illegible]

Benzo[a]anthracene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]pyrene	0.000000	0D	0.000000 mg/kg bw/d	A					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	A					
Benzo[k]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	B					
Benzo[e]pyrene	0.000000	0D	0.000000 mg/kg bw/d	B					
PAHs by EPA 8270D/SIM									
Benzo[a]anthracene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]pyrene	0.000000	0D	0.000000 mg/kg bw/d	D					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	D					
Benzo[k]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[e]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Fluorene	0.000000	0D	0.000000 mg/kg bw/d	B					
Benzo[a]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	A					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	X					
Fluorene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]anthracene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[k]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[e]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Fluorene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]anthracene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[k]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[e]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Fluorene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]anthracene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[a]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[b]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[k]fluoranthene	0.000000	0D	0.000000 mg/kg bw/d	C					
Benzo[e]pyrene	0.000000	0D	0.000000 mg/kg bw/d	C					
Total (SUM)				C	0.0005000	0.0075000	0.0047000	0.0023000	0.0430

		$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
0.000000		0.000000	0.000000	0.000000	0.000000	0.000000	0.0013036	WT02

0.000000
 0.000000
 3.000000

Registered
 0.000000
 3.000000

Registered
 0.000000
 3.000000



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 17, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge WO-1
Laboratory Reference No. 2308-161

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 15, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
Samples Submitted: August 15, 2023
Laboratory Reference: 2308-161
Project: Star Forge WO-1

Case Narrative

Samples were collected on August 14 and 15, 2023 and received by the laboratory on August 15, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D (Solid) Analysis

Method 5035A VOA vials were not provided for sample N. Tanks Concrete. The sample was therefore extracted from a 4-ounce jar. Some loss of volatiles may have occurred.

The percent recovery for surrogate Dibromofluoromethane is outside of the control limits for sample N. Tanks Concrete due to sample matrix effects. The sample was reanalyzed with similar results.

The percent recovery for Methylene Chloride is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Total Metals EPA 6010D/7471B Analysis

The sample result is reported on a wet weight basis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Dichlorodifluoromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chloromethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Vinyl Chloride	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromomethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Chloroethane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Trichlorofluoromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Acetone	ND	0.019	EPA 8260D	8-15-23	8-15-23	
Iodomethane	ND	0.013	EPA 8260D	8-15-23	8-15-23	
Carbon Disulfide	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methylene Chloride	ND	0.016	EPA 8260D	8-15-23	8-15-23	
(trans) 1,2-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methyl t-Butyl Ether	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Vinyl Acetate	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
2,2-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
(cis) 1,2-Dichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Butanone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Bromochloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chloroform	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,1-Trichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Carbon Tetrachloride	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Benzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Trichloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Dibromomethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromodichloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Chloroethyl Vinyl Ether	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
(cis) 1,3-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Methyl Isobutyl Ketone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Toluene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
(trans) 1,3-Dichloropropene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,2-Trichloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Tetrachloroethene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3-Dichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Hexanone	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Dibromochloromethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromoethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Chlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,1,2-Tetrachloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Ethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
m,p-Xylene	ND	0.0039	EPA 8260D	8-15-23	8-15-23	
o-Xylene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Styrene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromoform	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Isopropylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Bromobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,1,2,2-Tetrachloroethane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichloropropane	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
n-Propylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
2-Chlorotoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
4-Chlorotoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3,5-Trimethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
tert-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trimethylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
sec-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,3-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
p-Isopropyltoluene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,4-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
n-Butylbenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromo-3-chloropropane	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Hexachlorobutadiene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
Naphthalene	ND	0.0097	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichlorobenzene	ND	0.0019	EPA 8260D	8-15-23	8-15-23	
Surrogate: Percent Recovery Control Limits						
Dibromofluoromethane	27	75-130				Q,
Toluene-d8	109	78-128				
4-Bromofluorobenzene	98	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chloromethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromomethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Chloroethane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Acetone	ND	0.010	EPA 8260D	8-15-23	8-15-23	
Iodomethane	ND	0.0068	EPA 8260D	8-15-23	8-15-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methylene Chloride	ND	0.0080	EPA 8260D	8-15-23	8-15-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Vinyl Acetate	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Butanone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chloroform	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Benzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Toluene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S2					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Hexanone	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-15-23	8-15-23	
o-Xylene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Styrene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromoform	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
n-Propylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
tert-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
sec-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
n-Butylbenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
Naphthalene	ND	0.0050	EPA 8260D	8-15-23	8-15-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-15-23	8-15-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Solid
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0815S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0587	0.0577	0.0500	0.0500	117	115	30-160	2	26	
Chloromethane	0.0469	0.0443	0.0500	0.0500	94	89	59-131	6	26	
Vinyl Chloride	0.0530	0.0524	0.0500	0.0500	106	105	68-136	1	23	
Bromomethane	0.0672	0.0701	0.0500	0.0500	134	140	48-155	4	32	
Chloroethane	0.0530	0.0511	0.0500	0.0500	106	102	67-141	4	16	
Trichlorofluoromethane	0.0577	0.0565	0.0500	0.0500	115	113	76-127	2	19	
1,1-Dichloroethene	0.0573	0.0564	0.0500	0.0500	115	113	75-129	2	19	
Acetone	0.0536	0.0583	0.0500	0.0500	107	117	49-158	8	37	
Iodomethane	0.0367	0.0397	0.0500	0.0500	73	79	37-140	8	27	
Carbon Disulfide	0.0474	0.0455	0.0500	0.0500	95	91	41-143	4	19	
Methylene Chloride	0.0584	0.0688	0.0500	0.0500	117	138	60-124	16	18	I
(trans) 1,2-Dichloroethene	0.0559	0.0544	0.0500	0.0500	112	109	79-133	3	15	
Methyl t-Butyl Ether	0.0586	0.0569	0.0500	0.0500	117	114	73-125	3	17	
1,1-Dichloroethane	0.0548	0.0559	0.0500	0.0500	110	112	79-125	2	17	
Vinyl Acetate	0.0517	0.0545	0.0500	0.0500	103	109	51-145	5	41	
2,2-Dichloropropane	0.0619	0.0605	0.0500	0.0500	124	121	79-126	2	18	
(cis) 1,2-Dichloroethene	0.0565	0.0560	0.0500	0.0500	113	112	75-131	1	15	
2-Butanone	0.0510	0.0594	0.0500	0.0500	102	119	54-145	15	32	
Bromochloromethane	0.0567	0.0552	0.0500	0.0500	113	110	80-126	3	15	
Chloroform	0.0567	0.0562	0.0500	0.0500	113	112	80-123	1	15	
1,1,1-Trichloroethane	0.0575	0.0564	0.0500	0.0500	115	113	78-124	2	21	
Carbon Tetrachloride	0.0604	0.0619	0.0500	0.0500	121	124	74-127	2	18	
1,1-Dichloropropene	0.0583	0.0551	0.0500	0.0500	117	110	80-123	6	15	
Benzene	0.0577	0.0560	0.0500	0.0500	115	112	80-122	3	18	
1,2-Dichloroethane	0.0580	0.0552	0.0500	0.0500	116	110	75-124	5	15	
Trichloroethene	0.0554	0.0575	0.0500	0.0500	111	115	80-129	4	18	
1,2-Dichloropropane	0.0537	0.0552	0.0500	0.0500	107	110	80-123	3	15	
Dibromomethane	0.0529	0.0543	0.0500	0.0500	106	109	80-123	3	15	
Bromodichloromethane	0.0555	0.0572	0.0500	0.0500	111	114	80-129	3	15	
(cis) 1,3-Dichloropropene	0.0572	0.0589	0.0500	0.0500	114	118	80-130	3	15	
Methyl Isobutyl Ketone	0.0532	0.0611	0.0500	0.0500	106	122	63-137	14	27	
Toluene	0.0512	0.0534	0.0500	0.0500	102	107	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0553	0.0562	0.0500	0.0500	111	112	80-124	2	15	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0815S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0524	0.0518	0.0500	0.0500	105	104	80-120	1	15	
Tetrachloroethene	0.0541	0.0529	0.0500	0.0500	108	106	77-126	2	15	
1,3-Dichloropropane	0.0500	0.0517	0.0500	0.0500	100	103	77-123	3	15	
2-Hexanone	0.0492	0.0535	0.0500	0.0500	98	107	53-137	8	29	
Dibromochloromethane	0.0547	0.0556	0.0500	0.0500	109	111	80-128	2	16	
1,2-Dibromoethane	0.0512	0.0529	0.0500	0.0500	102	106	80-122	3	20	
Chlorobenzene	0.0505	0.0510	0.0500	0.0500	101	102	80-120	1	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0523	0.0500	0.0500	105	105	80-120	1	15	
Ethylbenzene	0.0516	0.0518	0.0500	0.0500	103	104	80-120	0	15	
m,p-Xylene	0.101	0.104	0.100	0.100	101	104	80-120	3	15	
o-Xylene	0.0502	0.0507	0.0500	0.0500	100	101	80-120	1	15	
Styrene	0.0514	0.0534	0.0500	0.0500	103	107	80-122	4	15	
Bromoform	0.0566	0.0574	0.0500	0.0500	113	115	78-126	1	15	
Isopropylbenzene	0.0520	0.0524	0.0500	0.0500	104	105	80-125	1	15	
Bromobenzene	0.0476	0.0510	0.0500	0.0500	95	102	79-124	7	15	
1,1,2,2-Tetrachloroethane	0.0490	0.0521	0.0500	0.0500	98	104	75-122	6	17	
1,2,3-Trichloropropane	0.0498	0.0541	0.0500	0.0500	100	108	72-125	8	20	
n-Propylbenzene	0.0485	0.0502	0.0500	0.0500	97	100	77-126	3	16	
2-Chlorotoluene	0.0471	0.0501	0.0500	0.0500	94	100	75-128	6	15	
4-Chlorotoluene	0.0496	0.0508	0.0500	0.0500	99	102	78-127	2	16	
1,3,5-Trimethylbenzene	0.0489	0.0514	0.0500	0.0500	98	103	77-128	5	15	
tert-Butylbenzene	0.0483	0.0498	0.0500	0.0500	97	100	73-130	3	20	
1,2,4-Trimethylbenzene	0.0489	0.0514	0.0500	0.0500	98	103	77-125	5	16	
sec-Butylbenzene	0.0493	0.0504	0.0500	0.0500	99	101	75-130	2	17	
1,3-Dichlorobenzene	0.0497	0.0525	0.0500	0.0500	99	105	78-123	5	17	
p-Isopropyltoluene	0.0499	0.0514	0.0500	0.0500	100	103	75-130	3	18	
1,4-Dichlorobenzene	0.0501	0.0516	0.0500	0.0500	100	103	77-121	3	17	
1,2-Dichlorobenzene	0.0490	0.0516	0.0500	0.0500	98	103	80-120	5	15	
n-Butylbenzene	0.0509	0.0528	0.0500	0.0500	102	106	76-131	4	20	
1,2-Dibromo-3-chloropropane	0.0563	0.0614	0.0500	0.0500	113	123	61-137	9	28	
1,2,4-Trichlorobenzene	0.0515	0.0559	0.0500	0.0500	103	112	77-127	8	17	
Hexachlorobutadiene	0.0507	0.0545	0.0500	0.0500	101	109	77-125	7	22	
Naphthalene	0.0515	0.0555	0.0500	0.0500	103	111	68-129	7	19	
1,2,3-Trichlorobenzene	0.0516	0.0555	0.0500	0.0500	103	111	77-124	7	19	
Surrogate:										
Dibromofluoromethane					103	99	75-130			
Toluene-d8					106	112	78-128			
4-Bromofluorobenzene					100	101	71-130			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromomethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	6.4	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	7.3	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	1.0	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	5.0	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	



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 Laboratory Reference: 2308-161
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	90	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	100	78-125				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	LP-water					
Laboratory ID:	08-161-03					
Dichlorodifluoromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride (SIM)	ND	0.20	EPA 8260D/SIM	8-16-23	8-16-23	
Bromomethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	10	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	64	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	73	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	10	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	10	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	50	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	20	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	10	EPA 8260D	8-16-23	8-16-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	LP-water					
Laboratory ID:	08-161-03					
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,2-Trichloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	20	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	4.0	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	10	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	2.0	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	10	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	10	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	10	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	91	75-127				
Toluene-d8	97	80-127				
4-Bromofluorobenzene	98	78-125				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloromethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Vinyl Chloride (SIM)	ND	0.020	EPA 8260D/SIM	8-16-23	8-16-23	
Bromomethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Chloroethane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Acetone	ND	6.4	EPA 8260D	8-16-23	8-16-23	
Iodomethane	ND	7.3	EPA 8260D	8-16-23	8-16-23	
Carbon Disulfide	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-16-23	8-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Vinyl Acetate	ND	1.0	EPA 8260D	8-16-23	8-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Butanone	ND	5.0	EPA 8260D	8-16-23	8-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chloroform	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Benzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Trichloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Dibromomethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Toluene	ND	1.0	EPA 8260D	8-16-23	8-16-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Hexanone	ND	2.0	EPA 8260D	8-16-23	8-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-16-23	8-16-23	
o-Xylene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Styrene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromoform	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Isopropylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Bromobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Propylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
n-Butylbenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
Naphthalene	ND	1.0	EPA 8260D	8-16-23	8-16-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-16-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>88</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD		SB	SBD			
Dichlorodifluoromethane	9.83	10.0	10.0	10.0		98	100	34-166	2	21
Chloromethane	10.3	10.6	10.0	10.0		103	106	63-138	3	18
Vinyl Chloride	10.8	10.9	10.0	10.0		108	109	71-135	1	20
Bromomethane	9.19	11.1	10.0	10.0		92	111	20-151	19	36
Chloroethane	9.11	9.45	10.0	10.0		91	95	76-125	4	20
Trichlorofluoromethane	9.44	9.87	10.0	10.0		94	99	75-131	4	19
1,1-Dichloroethene	9.23	9.33	10.0	10.0		92	93	78-125	1	19
Acetone	7.83	8.55	10.0	10.0		78	86	76-125	9	18
Iodomethane	6.84	7.49	10.0	10.0		68	75	10-155	9	40
Carbon Disulfide	8.90	8.60	10.0	10.0		89	86	58-129	3	17
Methylene Chloride	8.74	8.89	10.0	10.0		87	89	80-120	2	15
(trans) 1,2-Dichloroethene	9.27	9.51	10.0	10.0		93	95	80-125	3	17
Methyl t-Butyl Ether	9.15	9.26	10.0	10.0		92	93	80-122	1	15
1,1-Dichloroethane	9.20	9.27	10.0	10.0		92	93	80-125	1	17
Vinyl Acetate	9.23	9.07	10.0	10.0		92	91	80-131	2	15
2,2-Dichloropropane	11.3	11.6	10.0	10.0		113	116	80-146	3	21
(cis) 1,2-Dichloroethene	9.64	9.91	10.0	10.0		96	99	80-129	3	17
2-Butanone	8.77	9.06	10.0	10.0		88	91	80-129	3	16
Bromochloromethane	9.59	9.59	10.0	10.0		96	96	80-125	0	18
Chloroform	9.23	9.29	10.0	10.0		92	93	80-123	1	16
1,1,1-Trichloroethane	9.09	9.39	10.0	10.0		91	94	80-123	3	18
Carbon Tetrachloride	9.12	9.35	10.0	10.0		91	94	80-126	2	17
1,1-Dichloropropene	9.20	9.42	10.0	10.0		92	94	80-126	2	18
Benzene	9.30	9.42	10.0	10.0		93	94	80-121	1	16
1,2-Dichloroethane	9.07	9.07	10.0	10.0		91	91	80-124	0	15
Trichloroethene	9.22	9.51	10.0	10.0		92	95	80-122	3	18
1,2-Dichloropropane	9.52	9.73	10.0	10.0		95	97	80-123	2	15
Dibromomethane	9.87	9.77	10.0	10.0		99	98	80-123	1	15
Bromodichloromethane	10.2	10.4	10.0	10.0		102	104	80-125	2	15
(cis) 1,3-Dichloropropene	11.1	11.3	10.0	10.0		111	113	80-129	2	15
Methyl Isobutyl Ketone	9.65	9.71	10.0	10.0		97	97	80-124	1	15
Toluene	8.78	8.89	10.0	10.0		88	89	80-120	1	18
(trans) 1,3-Dichloropropene	10.9	10.9	10.0	10.0		109	109	80-134	0	17



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	10.5	10.7	10.0	10.0	105	107	77-126	2	20	
Tetrachloroethene	9.89	9.44	10.0	10.0	99	94	80-124	5	18	
1,3-Dichloropropane	10.3	10.4	10.0	10.0	103	104	80-120	1	15	
2-Hexanone	9.47	10.1	10.0	10.0	95	101	80-130	6	16	
Dibromochloromethane	9.43	9.94	10.0	10.0	94	99	80-128	5	15	
1,2-Dibromoethane	10.7	11.1	10.0	10.0	107	111	80-127	4	15	
Chlorobenzene	10.4	10.6	10.0	10.0	104	106	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.0	11.4	10.0	10.0	110	114	80-125	4	17	
Ethylbenzene	10.4	10.7	10.0	10.0	104	107	80-125	3	18	
m,p-Xylene	20.9	21.4	20.0	20.0	105	107	80-127	2	18	
o-Xylene	10.3	10.6	10.0	10.0	103	106	80-126	3	18	
Styrene	10.9	11.1	10.0	10.0	109	111	80-130	2	17	
Bromoform	11.4	11.5	10.0	10.0	114	115	80-130	1	15	
Isopropylbenzene	10.6	11.0	10.0	10.0	106	110	80-129	4	18	
Bromobenzene	10.7	11.6	10.0	10.0	107	116	76-128	8	16	
1,1,2,2-Tetrachloroethane	12.0	12.6	10.0	10.0	120	126	74-130	5	15	
1,2,3-Trichloropropane	10.8	11.4	10.0	10.0	108	114	71-129	5	25	
n-Propylbenzene	11.6	12.2	10.0	10.0	116	122	80-129	5	19	
2-Chlorotoluene	11.3	11.9	10.0	10.0	113	119	80-128	5	18	
4-Chlorotoluene	11.6	12.2	10.0	10.0	116	122	80-130	5	19	
1,3,5-Trimethylbenzene	11.4	11.9	10.0	10.0	114	119	80-131	4	18	
tert-Butylbenzene	11.0	11.7	10.0	10.0	110	117	80-130	6	18	
1,2,4-Trimethylbenzene	11.2	11.7	10.0	10.0	112	117	80-130	4	18	
sec-Butylbenzene	11.5	12.2	10.0	10.0	115	122	80-130	6	18	
1,3-Dichlorobenzene	11.1	11.7	10.0	10.0	111	117	80-126	5	17	
p-Isopropyltoluene	11.7	12.5	10.0	10.0	117	125	80-132	7	18	
1,4-Dichlorobenzene	10.9	11.3	10.0	10.0	109	113	80-121	4	17	
1,2-Dichlorobenzene	10.5	11.3	10.0	10.0	105	113	79-125	7	15	
n-Butylbenzene	12.7	13.4	10.0	10.0	127	134	80-138	5	19	
1,2-Dibromo-3-chloropropane	10.0	10.9	10.0	10.0	100	109	73-133	9	15	
1,2,4-Trichlorobenzene	12.3	12.7	10.0	10.0	123	127	80-139	3	18	
Hexachlorobutadiene	12.0	13.2	10.0	10.0	120	132	80-151	10	18	
Naphthalene	11.0	12.2	10.0	10.0	110	122	68-144	10	25	
1,2,3-Trichlorobenzene	11.9	12.8	10.0	10.0	119	128	75-146	7	28	
Surrogate:										
Dibromofluoromethane					90	92	75-127			
Toluene-d8					95	97	80-127			
4-Bromofluorobenzene					103	106	78-125			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PAHs EPA 8270E/SIM

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		N. Tanks Concrete				
Laboratory ID:		08-161-01				
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>81</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>76</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>81</i>	<i>44-121</i>				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816S1					
Naphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[j,k]fluoranthene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.0033	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	82	44-121				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0816S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0705	0.0717	0.0833	0.0833	85	86	57-116	2	16	
Acenaphthylene	0.0738	0.0799	0.0833	0.0833	89	96	59-124	8	15	
Acenaphthene	0.0719	0.0759	0.0833	0.0833	86	91	59-124	5	15	
Fluorene	0.0747	0.0775	0.0833	0.0833	90	93	62-122	4	15	
Phenanthrene	0.0731	0.0748	0.0833	0.0833	88	90	62-119	2	15	
Anthracene	0.0761	0.0798	0.0833	0.0833	91	96	64-123	5	15	
Fluoranthene	0.0735	0.0751	0.0833	0.0833	88	90	63-123	2	15	
Pyrene	0.0731	0.0750	0.0833	0.0833	88	90	62-124	3	15	
Benzo[a]anthracene	0.0788	0.0796	0.0833	0.0833	95	96	59-131	1	15	
Chrysene	0.0722	0.0752	0.0833	0.0833	87	90	61-124	4	15	
Benzo[b]fluoranthene	0.0815	0.0850	0.0833	0.0833	98	102	60-126	4	15	
Benzo(j,k)fluoranthene	0.0711	0.0732	0.0833	0.0833	85	88	63-121	3	17	
Benzo[a]pyrene	0.0790	0.0819	0.0833	0.0833	95	98	60-122	4	15	
Indeno(1,2,3-c,d)pyrene	0.0813	0.0875	0.0833	0.0833	98	105	58-127	7	15	
Dibenz[a,h]anthracene	0.0856	0.0887	0.0833	0.0833	103	106	60-124	4	15	
Benzo[g,h,i]perylene	0.0782	0.0812	0.0833	0.0833	94	97	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					77	81	39-111			
Pyrene-d10					78	79	47-114			
Terphenyl-d14					83	82	44-121			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PAHs EPA 8270E/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Naphthalene	ND	0.019	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.21	EPA 8270E/SIM	8-16-23	8-17-23	U1
Fluorene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	0.031	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	0.044	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	0.058	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	0.043	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	0.029	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	0.065	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	0.057	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	0.052	0.0095	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	60	26-106				
Pyrene-d10	54	45-104				
Terphenyl-d14	74	43-114				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PAHs EPA 8270E/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		LP-water				
Laboratory ID:		08-161-03				
Naphthalene	6.2	4.8	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	49	24	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	24	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	13	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	2.4	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	---	26-106				S
<i>Pyrene-d10</i>	---	45-104				S
<i>Terphenyl-d14</i>	---	43-114				S



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
Naphthalene	ND	0.020	EPA 8270E/SIM	8-16-23	8-17-23	
2-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
1-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthylene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Acenaphthene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Fluorene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Phenanthrene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Anthracene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Fluoranthene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Pyrene	ND	0.10	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]anthracene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Chrysene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[b]fluoranthene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270E/SIM	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	44	26-106				
Pyrene-d10	63	45-104				
Terphenyl-d14	70	43-114				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0816W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.291	0.346	0.500	0.500	58	69	35 - 84	17	34	
Acenaphthylene	0.403	0.462	0.500	0.500	81	92	44 - 97	14	29	
Acenaphthene	0.352	0.401	0.500	0.500	70	80	40 - 93	13	29	
Fluorene	0.375	0.422	0.500	0.500	75	84	46 - 97	12	24	
Phenanthrene	0.373	0.421	0.500	0.500	75	84	49 - 102	12	21	
Anthracene	0.388	0.441	0.500	0.500	78	88	50 - 99	13	21	
Fluoranthene	0.383	0.427	0.500	0.500	77	85	53 - 107	11	21	
Pyrene	0.375	0.422	0.500	0.500	75	84	52 - 111	12	23	
Benzo[a]anthracene	0.421	0.472	0.500	0.500	84	94	51 - 119	11	20	
Chrysene	0.393	0.433	0.500	0.500	79	87	52 - 113	10	21	
Benzo[b]fluoranthene	0.428	0.464	0.500	0.500	86	93	50 - 116	8	24	
Benzo(j,k)fluoranthene	0.390	0.446	0.500	0.500	78	89	54 - 113	13	22	
Benzo[a]pyrene	0.416	0.465	0.500	0.500	83	93	52 - 110	11	21	
Indeno(1,2,3-c,d)pyrene	0.459	0.508	0.500	0.500	92	102	55 - 114	10	21	
Dibenz[a,h]anthracene	0.471	0.530	0.500	0.500	94	106	55 - 111	12	19	
Benzo[g,h,i]perylene	0.431	0.486	0.500	0.500	86	97	52 - 111	12	20	
Surrogate:										
2-Fluorobiphenyl					61	65	26-106			
Pyrene-d10					67	72	45-104			
Terphenyl-d14					72	77	43-114			



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Aroclor 1016	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1221	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1232	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1242	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1248	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1254	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1260	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1262	ND	1.0	EPA 8082A	8-15-23	8-16-23	
Aroclor 1268	ND	1.0	EPA 8082A	8-15-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	114	50-127				



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815S1					
Aroclor 1016	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1221	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1232	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1242	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1248	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1254	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1260	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1262	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Aroclor 1268	ND	1.0	EPA 8082A	8-15-23	8-15-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	88	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-157-03									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.353	0.361	0.500	0.500	ND	71	72	41-121	2	28
Surrogate:										
DCB						83	84	50-127		



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	OWS-15					
Laboratory ID:	08-161-02					
Aroclor 1016	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-15-23	8-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-15-23	8-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	112	55-138				
Client ID:	LP-water					
Laboratory ID:	08-161-03					
Aroclor 1016	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1221	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1232	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1242	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1248	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1254	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1260	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1262	ND	25	EPA 8082A	8-16-23	8-17-23	
Aroclor 1268	ND	25	EPA 8082A	8-16-23	8-17-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	55-138				S, X



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815W1					
Aroclor 1016	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-15-23	8-15-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	78	55-138				
Laboratory ID:	MB0816W1 MCU					
Aroclor 1016	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-16-23	8-17-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	105	55-138				
						X

X

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS								
Laboratory ID:	SB0815W1							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.337	0.354	0.500	0.500	N/A	67	71	66-120 5 16
Surrogate:								
DCB	70 80 55-138							
Laboratory ID:	SB0816W1							
	SB	SBD	SB	SBD	SB	SBD		
Aroclor 1260	0.444	0.473	0.500	0.500	N/A	89	95	66-120 6 16
Surrogate:								
DCB	102 98 55-138							



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

TOTAL METALS
EPA 6010D/7471B

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: N. Tanks Concrete						
Laboratory ID: 08-161-01						
Arsenic	ND	10	EPA 6010D	8-15-23	8-15-23	
Barium	70	2.5	EPA 6010D	8-15-23	8-15-23	
Cadmium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Chromium	23	0.50	EPA 6010D	8-15-23	8-15-23	
Copper	75	1.0	EPA 6010D	8-15-23	8-15-23	
Lead	ND	5.0	EPA 6010D	8-15-23	8-15-23	
Mercury	ND	0.25	EPA 7471B	8-15-23	8-15-23	
Nickel	430	2.5	EPA 6010D	8-15-23	8-15-23	
Selenium	ND	10	EPA 6010D	8-15-23	8-15-23	
Silver	5.0	1.0	EPA 6010D	8-15-23	8-16-23	
Zinc	47	2.5	EPA 6010D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515SM2					
Arsenic	ND	10	EPA 6010D	8-15-23	8-15-23	
Barium	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Cadmium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Chromium	ND	0.50	EPA 6010D	8-15-23	8-15-23	
Copper	ND	1.0	EPA 6010D	8-15-23	8-15-23	
Lead	ND	5.0	EPA 6010D	8-15-23	8-15-23	
Nickel	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Selenium	ND	10	EPA 6010D	8-15-23	8-15-23	
Zinc	ND	2.5	EPA 6010D	8-15-23	8-15-23	
Laboratory ID:	MB0515S1					
Mercury	ND	0.25	EPA 7471B	8-15-23	8-15-23	
Laboratory ID:	MB0815SM1					
Silver	ND	1.0	EPA 6010D	8-15-23	8-15-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-155-02							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	43.2	50.1	NA	NA	NA	NA	15	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	13.3	14.2	NA	NA	NA	NA	7	20
Copper	28.3	27.5	NA	NA	NA	NA	3	20
Lead	22.9	22.2	NA	NA	NA	NA	3	20
Nickel	26.3	23.7	NA	NA	NA	NA	10	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Zinc	52.1	62.5	NA	NA	NA	NA	18	20

Laboratory ID:	08-155-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-155-02							
	ORIG	DUP						
Silver	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-155-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	94.8	94.8	100	100	ND	95	95	75-125	0	20
Barium	138	142	100	100	43.2	95	99	75-125	3	20
Cadmium	47.9	48.3	50.0	50.0	ND	96	97	75-125	1	20
Chromium	106	110	100	100	13.3	93	97	75-125	4	20
Copper	71.2	75.1	50.0	50.0	28.3	86	94	75-125	5	20
Lead	256	258	250	250	22.9	93	94	75-125	1	20
Nickel	117	121	100	100	26.3	90	95	75-125	4	20
Selenium	98.0	98.9	100	100	ND	98	99	75-125	1	20
Zinc	146	149	100	100	52.1	94	97	75-125	2	20

Laboratory ID:	08-155-02									
Mercury	0.514	0.517	0.500	0.500	0.0349	96	96	80-120	1	20

Laboratory ID:	08-155-02									
	MS	MSD	MS	MSD		MS	MSD			
Silver	22.4	21.0	25.0	25.0	ND	89	84	75-125	6	20



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Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

TOTAL METALS
EPA 6010D/7470A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		OWS-15				
Laboratory ID:		08-161-02				
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	

Client ID:		LP-water				
Laboratory ID:		08-161-03				
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816WH2					
Arsenic	ND	200	EPA 6010D	8-16-23	8-16-23	
Barium	ND	50	EPA 6010D	8-16-23	8-16-23	
Cadmium	ND	10	EPA 6010D	8-16-23	8-16-23	
Chromium	ND	10	EPA 6010D	8-16-23	8-16-23	
Copper	ND	20	EPA 6010D	8-16-23	8-16-23	
Lead	ND	100	EPA 6010D	8-16-23	8-16-23	
Nickel	ND	50	EPA 6010D	8-16-23	8-16-23	
Selenium	ND	200	EPA 6010D	8-16-23	8-16-23	
Silver	ND	20	EPA 6010D	8-16-23	8-16-23	
Zinc	ND	50	EPA 6010D	8-16-23	8-16-23	
Laboratory ID:	MB0817W1					
Mercury	ND	0.50	EPA 7470A	8-17-23	8-17-23	



Date of Report: August 17, 2023
 Samples Submitted: August 15, 2023
 Laboratory Reference: 2308-161
 Project: Star Forge WO-1

**TOTAL METALS
 EPA 6010D /7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-038-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	ND	ND	NA	NA	NA	NA	NA	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	ND	ND	NA	NA	NA	NA	NA	20
Copper	ND	ND	NA	NA	NA	NA	NA	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-158-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-038-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	1940	1870	2000	2000	ND	97	94	75-125	3	20
Barium	2070	2020	2000	2000	ND	103	101	75-125	2	20
Cadmium	977	953	1000	1000	ND	98	95	75-125	2	20
Chromium	2040	1980	2000	2000	ND	102	99	75-125	3	20
Copper	1010	993	1000	1000	ND	101	99	75-125	2	20
Lead	5150	5070	5000	5000	ND	103	101	75-125	1	20
Nickel	2020	1980	2000	2000	ND	101	99	75-125	2	20
Selenium	1960	1900	2000	2000	ND	98	95	75-125	3	20
Silver	470	459	500	500	ND	94	92	75-125	2	20
Zinc	2020	1970	2000	2000	ND	101	99	75-125	3	20

Laboratory ID:	08-158-01									
Mercury	5.98	6.03	6.25	6.25	ND	96	96	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: DE Environmental		(Check One)				
Project Number:		☐ Same Day	☐ 1 Day			
Project Name:	Star Forge WO-1	☒ 2 Days	☒ 3 Days			
Project Manager:	Dave Hill	☐ Standard (7 Days)	☒ N/A			
Sampled by:	N. Moxley / J. Brien	☐ _____ (other)				
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	
1	N. Tanks Concrete	8/14/23	1215	Soil	2	NWTPH-HCID
2	OWS-15	8/14/23	1300	Water	9	NWTPH-Gx/BTEX (8021 ☐ 8260 <input checkbox="" type="checkbox/>)</td></tr><tr><td>3</td><td>LP-Water</td><td>8/15/23</td><td>1030</td><td>Water</td><td>9</td><td>NWTPH-Gx</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>NWTPH-Dx (SG Clean-up <input type="/>)
						Volatiles 8260
						Halogenated Volatiles 8260
						EDB EPA 8011 (Waters Only)
						Semivolatiles 8270/SIM (with low-level PAHs)
						PAHs 8270/SIM (low-level)
						PCBs 8082
						Organochlorine Pesticides 8081
						Organophosphorus Pesticides 8270/SIM
						Chlorinated Acid Herbicides 8151
						Total RCRA Metals + Cu, Ni, Zn
						Total MTCA Metals
						TCLP Metals
						HEM (oil and grease) 1664
						% Moisture
Signature		Company		Date	Time	Comments/Special Instructions
		DE Environmental		8-15-23	1:15	LP-Water contains LWAPL
		OSC		8/15/23	1315	data to data@deenvironment.com
Relinquished						Hold for possible follow-up of TCLP color
Received						fish bioassay
Relinquished						
Received						
Reviewed/Date		Reviewed/Date		Data Package: Standard ☒ Level III ☐ Level IV ☐		
				Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 28, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge WO-1
Laboratory Reference No. 2308-161B

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 15, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



Dangerous Waste Characterization

Sample ID: N. Tanks Concrete

Report date: August 28, 2023

Submitted to:

OnSite Environmental

14648 NE 95th Street

Redmond, WA 98052

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on one sample submitted by OnSite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The sample, N. Tanks Concrete, was received in the laboratory on August 23, 2023. Upon arrival at the laboratory the sample was inspected and contents verified against information provided on the chain-of-custody form. The sample was stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number	2308-038
Sample ID	N. Tanks Concrete
Test initiation date; time	8/23/2023; 0945h
Test termination date; time	8/27/2023; 0945h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The sample was tested using fish received on July 12, 2023.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	62 days post swim-up (hatch date 5/31/2023)
Mean weight	0.41 g
Mean length	41 mm
Ratio of longest to shortest	1.2
Loading	0.68 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on N. Tanks Concrete is contained in Table 3. There was no mortality during the test. Based on these results, the sample does not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
N. Tanks	10	30	0	None
Concrete	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated August 16, 2023. The LC₅₀ of 166 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 31.3 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2020. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised September 2020.

Appendix A
***Oncorhynchus mykiss* Dangerous Waste Toxicity Test**
Raw Bench Sheets

Dangerous Waste Toxicity Test

Client: OnSite Environmental Inc.

Sample ID: N. Tanks Concrete

Test #: 2308-038

Log In #: T23-264

Start Date & Time: 8/23/2023 0945

End Date & Time: 8/27/2023 0945

Test Organism: Oncorhynchus mykiss

Test Protocol: Washington State Department of Ecology Publ. 80-12

[illegible]

Test Volume:

Trout Lodge
7/12/2023

Date of Hatch:	5/31	2023
Date of Swim up:	6/21	2023

Sample	Alk. (int.)	Hard. (init.)	Alk. (fin.)	Hard. (fin.)	Chlorine
	(mg/L as CaCO ₃)				(mg/L Cl ₂)
Control	69	100	69	100	4003
100PPM	69	100	69	100	
					Length max

Weights (g):	Lengths (mm):	Length max/min:	Loading:
341	388	448	336
341	391	441	337
341	394	444	339
341	397	447	341
341	400	450	341
341	403	453	341
341	406	456	341
341	409	459	341
341	412	462	341
341	415	465	341
341	418	468	341
341	421	471	341
341	424	474	341
341	427	477	341
341	430	480	341
341	433	483	341
341	436	486	341
341	439	489	341
341	442	492	341
341	445	495	341
341	448	498	341
341	451	501	341
341	454	504	341
341	457	507	341
341	460	510	341
341	463	513	341
341	466	516	341
341	469	519	341
341	472	522	341
341	475	525	341
341	478	528	341
341	481	531	341
341	484	534	341
341	487	537	341
341	490	540	341
341	493	543	341
341	496	546	341
341	499	549	341
341	502	552	341
341	505	555	341
341	508	558	341
341	511	561	341
341	514	564	341
341	517	567	341
341	520	570	341
341	523	573	341
341	526	576	341
341	529	579	341
341	532	582	341
341	535	585	341
341	538	588	341
341	541	591	341
341	544	594	341
341	547	597	341
341	550	600	341
341	553	603	341
341	556	606	341
341	559	609	341
341	562	612	341
341	565	615	341
341	568	618	341
341	571	621	341
341	574	624	341
341	577	627	341
341	580	630	341
341	583	633	341
341	586	636	341
341	589	639	341
341	592	642	341
341	595	645	341
341	598	648	341
341	601	651	341
341	604	654	341
341	607	657	341
341	610	660	341
341	613	663	341
341	616	666	341
341	619	669	341
341	622	672	341
341	625	675	341
341	628	678	341
341	631	681	341
341	634	684	341
341	637	687	341
341	640	690	341
341	643	693	341
341	646	696	341
341	649	699	341
341	652	702	341
341	655	705	341
341	658	708	341
341	661	711	341
341	664	714	341
341	667	717	341

Loading: 0.69 g/l

$\mu = \underline{.41}$ Rainier Environmental
 $\mu = \underline{.41}$ Washington Laboratory

5013 Pacific HWY E Suite 20

Dilution Water Source: MHW 075

QA Check 87

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

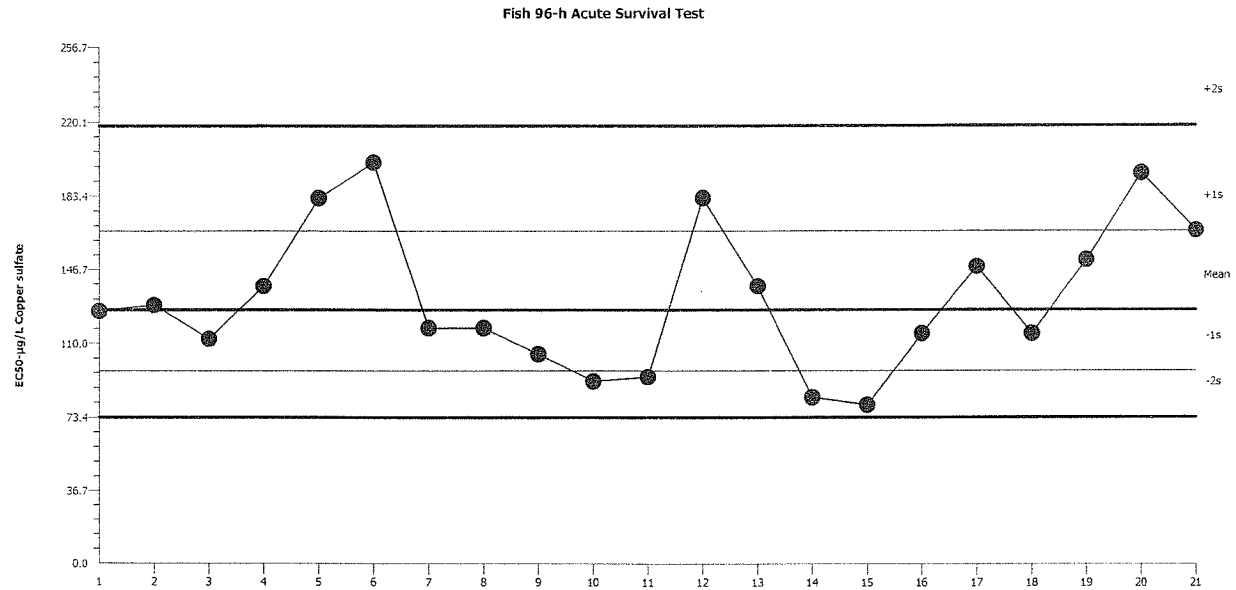
Organism: Oncorhynchus mykiss (Rainbow Tro

Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF



Mean: 126.5

Count: 20

-1s Warning Limit: 96.31

-2s Action Limit: 73.35

Sigma: NA

CV: 31.30%

+1s Warning Limit: 166.1

+2s Action Limit: 218.1

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Dec	6	126	-0.4773	-0.01388			13-8732-0751	08-1557-4326
2	2022	Jan	5	128.9	2.468	0.07094			08-2261-8669	03-7761-6146
3		Feb	5	112.2	-14.22	-0.438			01-7899-0440	09-8784-8920
4		Mar	7	138.2	11.72	0.3254			15-8880-5349	18-5703-0746
5		Apr	11	182.3	55.88	1.343	(+)		19-4475-1025	00-2732-4149
6		May	11	200	73.53	1.683	(+)		04-3686-1214	17-7144-4708
7		Jun	13	117.6	-8.915	-0.2683			02-1194-6933	14-6655-2671
8		Jul	11	117.6	-8.915	-0.2683			18-9490-6426	20-8229-8763
9		Aug	12	104.7	-21.74	-0.6924			16-1269-6384	20-8498-8487
10		Sep	14	91.17	-35.3	-1.201	(-)		21-3997-4244	00-3631-7496
11		Oct	10	93.3	-33.17	-1.117	(-)		01-3925-6404	03-9134-1193
12		Nov	14	182.3	55.88	1.343	(+)		09-0829-7750	07-1545-0995
13		Dec	12	138.2	11.72	0.3254			02-0643-2090	02-3247-9401
14	2023	Jan	12	83.12	-43.35	-1.541	(-)		10-5717-9012	06-2162-7195
15		Feb	13	79.37	-47.1	-1.71	(-)		19-2977-9552	20-0081-1333
16		Mar	13	114.9	-11.6	-0.3532			14-1992-9075	20-3196-8530
17		Apr	14	148.1	21.64	0.5799			00-0643-4903	11-5830-8594
18		May	15	114.9	-11.6	-0.3532			06-5181-9947	15-0207-5859
19		Jun	13	151.6	25.1	0.6647			16-7900-9504	12-9379-3365
20		Jul	14	194.7	68.27	1.585	(+)		19-5463-0764	04-3793-4724
21		Aug	16	166.2	39.78	1.004	(+)		09-9289-7634	17-7520-8601

CETIS Summary Report

Report Date: 21 Aug-23 10:41 (p 1 of 1)
 Test Code: RA081623OM | 09-9289-7634

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	10-3512-0978	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	16 Aug-23 13:30	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	20 Aug-23 13:30	Species:	Oncorhynchus mykiss	Brine:	
Duration:	96h	Source:	Trout Lodge Fish Farm	Age:	55d
Sample ID:	09-7638-9830	Code:	RA081623OM	Client:	Internal Lab
Sample Date:	16 Aug-23	Material:	Copper sulfate	Project:	
Receive Date:	16 Aug-23	Source:	Reference Toxicant		
Sample Age:	14h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-5429-9781	96h Survival Rate	50	100	70.71	16.9%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-7520-8601	96h Survival Rate	LC50	166.2	141.5	195.3		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.8	0.7627	0.8373	0.7	0.9	0.05774	0.1	12.5%	20.0%
200		3	0.4333	0.3394	0.5273	0.2	0.7	0.1453	0.2517	58.08%	56.67%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.9	0.7	0.8
200		0.4	0.7	0.2
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		9/10	7/10	8/10
200		4/10	7/10	2/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



Turnaround Request

1 Day 2 Day 3 Day

Project Number:

email: dbaumeister@onsite-env.com

Project Number:

dbaumeister@ons

Project Number:

dbaumeister@onsite-env.com

Project Number:

dbaumeister@onsite-env.com

[illegible]



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Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14649 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com						
Civil Engineering Inc.						
Company: <u>DH Environmental</u>						
Project Number:						
Project Name: <u>Silver Forge WO-1</u>						
Project Manager: <u>Dave Hill</u>						
Sampled by: <u>N. Moxley / J. Brien</u> ☐ Same Day ☒ 2 Days ☒ 3 Days ☐ Standard (7 Days)						
Date Sampled: _____ (other) _____						
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Laboratory Number: <u>08-161</u>
1	N. Tanks Concrete	8/14/23	1215	Soil	2	NWTPH-HCID
2	OWS-15	8/14/23	1300	Water	9	NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)
3	LP-Water	8/15/23	1030	Water	9	NWTPH-Gx
						NWTPH-Dx (SG Clean-up ☐)
						Volatiles 8260
						Halogenated Volatiles 8260
						EDB EPA 8011 (Waters Only)
						Semivolatiles 8270/SIM (with low-level PAHs)
						PAHs 8270/SIM (low-level)
						PCBs 8082
						Organochlorine Pesticides 8081
						Organophosphorus Pesticides 8270/SIM
						Chlorinated Acid Herbicides 8151
						Total RCRA Metals + Cu, Ni, Zn
						Total MTCA Metals
						TCLP Metals
						HEM (oil and grease) 1664
						Fish Bioassay
						% Moisture



DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site, UST Piping Soil

A. WASTE STREAM NAME AND GENERATION INFORMATION																																				
Waste Stream Name: UST Piping Soil																																				
Generation Process: Utility piping excavation																																				
RCRA ID Number that waste will be managed under: NA		Total Quantity and/or Estimated Generation rate: ~ 40 cubic yards																																		
Other Descriptions (i.e. Shop, Project, Etc.):																																				
B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:																																				
Physical State: ☒ Solid (pass paint filter) ☐ Solid w/freestanding or absorbed liquid ☐ Liquid (If liquid, indicate if the liquid is: ☐ Single Layer ☐ Multi-layer		pH: ☐ < 2 [D002] ☐ > 2 but < 12.5 ☒ N/A ☐ > 12.5 [D002]																																		
		Flashpoint: ☐ < 140 °F [D001] ☐ > 140 °F but < 200 °F ☒ N/A ☐ > 200 °F																																		
Characteristic	PCB Content	TCLP Metals	Total Metals																																	
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☒ TCLP Conducted ☐ TCLP Not Conducted Comments: TCLP lead was non-detect for sample greater than “20x rule”	☒ mg/kg ☐ ug/kg ☐ mg/L ☐ ug/L <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Arsenic:</td> <td style="width: 20%; text-align: center;">31</td> <td style="width: 30%; text-align: center;">☐ ND</td> </tr> <tr> <td>Barium:</td> <td style="text-align: center;">82</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Cadmium:</td> <td style="text-align: center;">0.85</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Chromium:</td> <td style="text-align: center;">55</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Copper:</td> <td style="text-align: center;">180</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Lead:</td> <td style="text-align: center;">110</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Mercury:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Nickel:</td> <td style="text-align: center;">1,100</td> <td style="text-align: center;">☐ ND</td> </tr> <tr> <td>Selenium:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Silver:</td> <td></td> <td style="text-align: center;">☒ ND</td> </tr> <tr> <td>Zinc:</td> <td style="text-align: center;">280</td> <td style="text-align: center;">☐ ND</td> </tr> </table> Comments: Values represent the highest concentrations among all samples	Arsenic:	31	☐ ND	Barium:	82	☐ ND	Cadmium:	0.85	☐ ND	Chromium:	55	☐ ND	Copper:	180	☐ ND	Lead:	110	☐ ND	Mercury:		☒ ND	Nickel:	1,100	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Zinc:	280	☐ ND
Arsenic:	31	☐ ND																																		
Barium:	82	☐ ND																																		
Cadmium:	0.85	☐ ND																																		
Chromium:	55	☐ ND																																		
Copper:	180	☐ ND																																		
Lead:	110	☐ ND																																		
Mercury:		☒ ND																																		
Nickel:	1,100	☐ ND																																		
Selenium:		☒ ND																																		
Silver:		☒ ND																																		
Zinc:	280	☐ ND																																		
Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).																																				
Constituent		Volume (Range %)																																		
Concrete/Asphalt/debris		25 - 50																																		
Soil		50 - 75																																		



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0 % [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100, for each soil sample representative of the waste stream. Two samples had a calculated equivalent concentration (EC) value greater than 0.001%, resulting in an initial criteria waste designation of WT02. A follow-up fish bioassay was performed in accordance with WAC 173-303-110(3)(b), *Biological Testing Methods for the Designation of Dangerous Waste Method 80-12*, for the sample with the highest EC value. The fish bioassay test resulted in zero mortality, which refutes the initial WT02 designation. **This waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2308-254, 2308-254B, and 2310-177)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☒ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:

F. WASTE DESIGNATION SUMMARY

- ☐ RCRA Hazardous Waste
USDOT Proper Shipping Name:
RCRA Waste Codes:
- ☐ TSCA Regulated Waste
TSCA Description:
- ☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded
Description: Non-hazardous waste, solid

Designation Performed by: Nathan Moxley, LHG
Title: Senior Geologist

Date: 10-17-2023

Designation Reviewed by: Dave Hill, PE, CHMM
Title: Principal Engineer

Date: 10-17-2023

Project: Jorgensen N. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: NT-Piping-Soil-1
Sample Date: 8/23/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	35	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	18	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				1.80E-03	
Copper	7440-50-8	58	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ³	A		5.80E-03			
Lead	7439-92-1	24	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.40E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	150	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.50E-02
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	82	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			8.20E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/L/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D				
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D				
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D				
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C				
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D				
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C				
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C				
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	0.66	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C				6.60E-05	
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	0.13	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C				1.30E-05	
Fluorene	86-73-7	0.25	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B			2.50E-05		
Phenanthrene	85-01-8	2.6	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		2.60E-04			
Anthracene	120-12-7	0.58	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	5.80E-05				
Fluoranthene	206-44-0	4.4	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				4.40E-04	
Pyrene	129-00-0	3.5	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				3.50E-04	
Benzo(a)anthracene	56-55-3	2.6	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.60E-04	
Chrysene	218-01-9	2.8	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C				2.80E-04	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	3.42	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.42E-04	
Benzo(a)pyrene	50-32-8	1.8	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.80E-04	
Indeno(1,2,3-cd)pyrene	193-39-5	0.99	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.90E-05	
Dibenz(a,h)anthracene	53-70-3	0.32	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.20E-05	
Benzo(g,h,i)perylene	198-55-0	0.93	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.30E-05	
Total (SUM)					0.0000580	0.0060600	0.0082250	0.0063550	0.0150

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	5.80E-05	6.06E-03	8.23E-03	6.36E-03	1.50E-02		
	5.80E-05	6.06E-04	8.23E-05	6.36E-06	1.50E-06	0.0007541	Non-Dangerous Waste

Sources

- 1 RTECS: Registry of Toxic Effects of Chemical Substances
- 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
- 3 ECOTOX Database: United States Environmental Protection Agency

Project: Jorgensen N. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: NT-Piping-Soil-2
Sample Date: 8/23/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	16	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.60E-03		
Barium	7440-39-3	60	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	46	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				4.60E-03	
Copper	7440-50-8	180	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		1.80E-02			
Lead	7439-92-1	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.10E-02	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	1100	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.10E-01
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	120	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.20E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	0.11	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			1.10E-05		
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	0.041	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		4.10E-06			
Anthracene	120-12-7	ND	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	0.066	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				6.60E-06	
Pyrene	129-00-0	0.062	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				6.20E-06	
Benzo(a)anthracene	56-55-3	0.033	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.30E-06	
Chrysene	218-01-9	0.045	LC50 Neanthes arenaceodentata (fish) > 1 mg/L96 hr	C				4.50E-06	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.049	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.90E-06	
Benzo(a)pyrene	50-32-8	0.036	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.60E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	0.029	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.90E-06	
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	0.041	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.10E-06	
Total (SUM)					0.0000000	0.0180041	0.0136110	0.0156361	0.1100

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	0.00E+00	1.80E-02	1.36E-02	1.56E-02	1.10E-01		
	0.00E+00	1.80E-03	1.36E-04	1.56E-05	1.10E-05	0.0019632	WT02

Sources

- 1 RTECS: Registry of Toxic Effects of Chemical Substances
- 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
- 3 ECOTOX Database: United States Environmental Protection Agency

Project: Jorgensen N. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: NT-Piping-Soil-3
Sample Date: 8/23/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	18	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B			1.80E-03		
Barium	7440-39-3	54	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	54	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.40E-03	
Copper	7440-50-8	170	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ³	A		1.70E-02			
Lead	7439-92-1	46	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				4.60E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	810	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					8.10E-02
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	150	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			1.50E-02		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/L/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C					
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C					
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C					
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C					
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	0.056	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B			5.60E-06		
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	0.12	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C				1.20E-05	
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	ND	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	0.84	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A		8.40E-05			
Anthracene	120-12-7	0.21	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X	2.10E-05				
Fluoranthene	206-44-0	1.5	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C				1.50E-04	
Pyrene	129-00-0	1.2	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C				1.20E-04	
Benzo(a)anthracene	56-55-3	0.87	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				8.70E-05	
Chrysene	218-01-9	0.92	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C				9.20E-05	
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	1.16	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.16E-04	
Benzo(a)pyrene	50-32-8	0.61	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				6.10E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.33	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.30E-05	
Dibenz(a,h)anthracene	53-70-3	0.11	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.10E-05	
Benzo(g,h,i)perylene	198-55-0	0.31	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.10E-05	
Total (SUM)					0.0000210	0.0170840	0.0168056	0.0107130	0.0810

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	2.10E-05	1.71E-02	1.68E-02	1.07E-02	8.10E-02		
	2.10E-05	1.71E-03	1.68E-04	1.07E-05	8.10E-06	0.0019163	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

Project: Jorgensen S. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: ST-piping-SS-20-6.5
Sample Date: 10/13/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as			mg/kg	Conversion Factor	1 mg/kg = 10^-4 %					
CAS			Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B										
Arsenic	7440-38-2	31	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B				3.10E-03		
Barium	7440-39-3	82	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE						
Cadmium	7440-43-9	0.85	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X	8.50E-05					
Chromium	7440-47-3	25	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C					2.50E-03	
Copper	7440-50-8	67	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		6.70E-03				
Lead	7439-92-1	49	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C					4.90E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C						
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A						
Nickel	7440-02-0	94	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C						9.40E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D						
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X						
Zinc	7440-66-6	280	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B				2.80E-02		
VOLATILES by EPA 8260C										
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE						
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D						
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C						
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C						
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C						
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C						
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C						
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D						
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C						
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D						
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D						
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D						
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D						
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D						
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C						
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D						
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE						
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D						
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D						
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B						
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D						
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D						
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C						

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C					
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	0.4	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				4.00E-05	
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	0.46	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				4.60E-05	
m,p-Xylene	108-38-3, 106-42-3	2.1	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				2.10E-04	
o-Xylene	95-47-6	0.87	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				8.70E-05	
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D					
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D					
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C					
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D					
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D					
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C					
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	2.1	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C				2.10E-04	
2-methylnaphthalene	91-57-6	6.6	1630 mg/kg Oral Rat LD50 ²	D					6.60E-04
1-methylnaphthalene	90-12-0	4.6	1840 mg/kg Oral Rate LD50 ²	D					4.60E-04
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Chrysene	218-01-9	0.071	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C				7.10E-06	
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	0.045	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				4.50E-06	
Benzo(a)pyrene	50-32-8	0.034	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.40E-06	
Indeno(1,2,3-cd)pyrene	193-39-5	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Dibenz(a,h)anthracene	53-70-3	ND	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Total (SUM)					0.0000850	0.0067000	0.0311000	0.0080080	0.0105

Enter Category Mass % Here	$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
	8.50E-05	6.70E-03	3.11E-02	8.01E-03	1.05E-02		
	8.50E-05	6.70E-04	3.11E-04	8.01E-06	1.05E-06	0.0010751	WT02

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

Project: Jorgensen S. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: ST-piping-SS-21-2.0
Sample Date: 10/13/23
Book Designation Performed by: N. Moxley

Conversions
1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
			0.0001						
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	41	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	55	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				5.50E-03	
Copper	7440-50-8	56	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		5.60E-03			
Lead	7439-92-1	18	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.80E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	64	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					6.40E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	44	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			4.40E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D				
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D				
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D				
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C				
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D				
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C				
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ³	C				
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	0.0012	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				1.20E-07
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	0.11	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.10E-05	
Chrysene	218-01-9	0.13	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C				1.30E-05	
Benzo(a)fluoranthene (total)	(205-99-2) (207-08-9)	0.236	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				2.36E-05	
Benzo(a)pyrene	50-32-8	0.13	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.30E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.16	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				1.60E-05	
Dibenz(a,h)anthracene	53-70-3	0.031	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.10E-06	
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Total (SUM)					0.0000000	0.0056000	0.0044000	0.0073798	0.0064

		$\sum X\% / 1$	$\sum A\% / 10$	$\sum B\% / 100$	$\sum C\% / 1000$	$\sum D\% / 10000$	EC	Designation
Enter Category Mass % Here		0.00E+00	5.60E-03	4.40E-03	7.38E-03	6.40E-03		
		0.00E+00	5.60E-04	4.40E-05	7.38E-06	6.40E-07	0.0006120	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency

Project: Jorgensen S. Tanks Piping Soil
Waste Stream: Soil
Sample IDs: ST-piping-SS-22-2.0
Sample Date: 10/13/23
Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		mg/kg	Conversion Factor	Concentration (mass %)					
		0.0001							
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	33	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	20	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				2.00E-03	
Copper	7440-50-8	30	LC50 Pimephales promelas (fathead minnow) 0.02 mg/L/96 hr ³	A		3.00E-03			
Lead	7439-92-1	18	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				1.80E-03	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	58	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					5.80E-03
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	43	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			4.30E-03		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	ND	LC Rat Inhalation 50.10 mg/kg ¹	D					
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ¹	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis macrochirus (bluegill) 135,000 ug/L/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					
1,1-Dichloropropene	563-58-6	ND	TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					

Benzene	71-43-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D				
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D				
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D				
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C				
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D				
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C				
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C				
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D				
Toluene	108-88-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C				
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D				
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C				
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D				
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D				
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C				
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C				
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C				
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D				
Ethylbenzene	100-41-4	ND	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				
m,p-Xylene	108-38-3, 106-42-3	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				
o-Xylene	95-47-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A				
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C				
Isopropylbenzene	98-82-8	ND	1400 mg/kg Oral Rat LD50 ²	D				
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D				
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C				
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C				
n-propyl benzene	103-65-1	ND	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE				
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D				
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D				
1,3,5-Trimethylbenzene	108-67-8	ND	LD50 Oral Rat 5000 mg/kg ¹	D				
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D				
1,2,4-Trimethylbenzene	95-63-6	ND	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				
sec-Butylbenzene	135-98-8	ND	2240 mg/kg Oral Rat LD50 ²	D				
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D				
p-Isopropyltoluene	99-87-6	ND	LD50 Rat oral 4750 mg/kg ²	D				
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C				
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C				
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D				
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C				
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D				
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C				
Naphthalene	91-20-3	ND	LD50 Oral Rat 490 mg/kg ³	C				
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D				
PCBs by EPA 8082A								
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B				
Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C				

Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
PAHs by EPA 8270D/SIM									
Naphthalene	91-20-3	ND	LC50 Oncorhynchus gorbuscha (pink salmon) 1.4 mg/L/96 hr ²	C					
2-methylnaphthalene	91-57-6	ND	1630 mg/kg Oral Rat LD50 ²	D					
1-methylnaphthalene	90-12-0	ND	1840 mg/kg Oral Rate LD50 ²	D					
Acenaphthylene	208-96-8	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Acenaphthene	83-32-9	--	LC50 Oncorhynchus mykiss (Rainbow trout) 1570 ug/L 96hr ³	C					
Fluorene	86-73-7	--	LC50 Oncorhynchus mykiss (Rainbow trout) 820 ug/L 96hr ³	B					
Phenanthrene	85-01-8	--	LC50 Oncorhynchus mykiss (Rainbow trout, larvae) 40 ug/L 27 days ²	A					
Anthracene	120-12-7	--	LC50 Lepomis macrochirus (bluegill) 1.27 ug/L 96hr ²	X					
Fluoranthene	206-44-0	--	LC50 Lepomis macrochirus (bluegill) 3980 ug/L 96hr ²	C					
Pyrene	129-00-0	--	LC50 Oncorhynchus mykiss (Rainbow trout) 2000 ug/L 96hr ³	C					
Benzo(a)anthracene	56-55-3	0.57	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				5.70E-05	
Chrysene	218-01-9	0.59	LC50 Neanthes arenaceodentata (fish) > 1 mg/L/96 hr	C				5.90E-05	
Benzofluoranthenes (total)	(205-99-2) (207-08-9)	0.91	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				9.10E-05	
Benzo(a)pyrene	50-32-8	0.63	LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				6.30E-05	
Indeno(1,2,3-cd)pyrene	193-39-5	0.37	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				3.70E-05	
Dibenz(a,h)anthracene	53-70-3	0.088	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C				8.80E-06	
Benzo(g,h,i)perylene	198-55-0	--	NO DATA AVAILABLE: Taken as equivalent to Benzo(a)pyrene, LC50 Poeciliopsis lucida (Clearfin livebearer) 1.2-3.7 mg/l 24-hr ²	C					
Total (SUM)					0.0000000	0.0030000	0.0043000	0.0041158	0.0058

Enter Category Mass % Here						EC	Designation
	ΣX% / 1	ΣA% / 10	ΣB% / 100	ΣC% / 1000	ΣD% / 10000		
	0.00E+00	3.00E-03	4.30E-03	4.12E-03	5.80E-03		
	0.00E+00	3.00E-04	4.30E-05	4.12E-06	5.80E-07	0.0003477	Non-Dangerous Waste

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 28, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Waste Designation
Laboratory Reference No. 2308-254

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 28, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254
Project: Star Forge Waste Designation

Case Narrative

Samples were collected on August 23, 2023 and received by the laboratory on August 23, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Dichlorodifluoromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0066	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	



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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
(trans) 1,3-Dichloropropene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0033	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00066	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	101	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0086	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0065	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	



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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0017	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0043	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	99	71-130				



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Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0083	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0063	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0017	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0042	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	102	71-130				



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 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.010	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0076	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	



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 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0370	0.0500	0.0500	75	74	30-160	1	26	
Chloromethane	0.0410	0.0429	0.0500	0.0500	82	86	59-131	5	26	
Vinyl Chloride	0.0440	0.0473	0.0500	0.0500	88	95	68-136	7	23	
Bromomethane	0.0420	0.0476	0.0500	0.0500	84	95	48-155	13	32	
Chloroethane	0.0458	0.0506	0.0500	0.0500	92	101	67-141	10	16	
Trichlorofluoromethane	0.0513	0.0575	0.0500	0.0500	103	115	76-127	11	19	
1,1-Dichloroethene	0.0489	0.0544	0.0500	0.0500	98	109	75-129	11	19	
Acetone	0.0572	0.0568	0.0500	0.0500	114	114	49-158	1	37	
Iodomethane	0.0328	0.0389	0.0500	0.0500	66	78	37-140	17	27	
Carbon Disulfide	0.0415	0.0452	0.0500	0.0500	83	90	41-143	9	19	
Methylene Chloride	0.0467	0.0525	0.0500	0.0500	93	105	60-124	12	18	
(trans) 1,2-Dichloroethene	0.0489	0.0538	0.0500	0.0500	98	108	79-133	10	15	
Methyl t-Butyl Ether	0.0498	0.0526	0.0500	0.0500	100	105	73-125	5	17	
1,1-Dichloroethane	0.0491	0.0541	0.0500	0.0500	98	108	79-125	10	17	
Vinyl Acetate	0.0538	0.0552	0.0500	0.0500	108	110	51-145	3	41	
2,2-Dichloropropane	0.0532	0.0532	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0523	0.0574	0.0500	0.0500	105	115	75-131	9	15	
2-Butanone	0.0567	0.0572	0.0500	0.0500	113	114	54-145	1	32	
Bromochloromethane	0.0496	0.0552	0.0500	0.0500	99	110	80-126	11	15	
Chloroform	0.0488	0.0525	0.0500	0.0500	98	105	80-123	7	15	
1,1,1-Trichloroethane	0.0466	0.0523	0.0500	0.0500	93	105	78-124	12	21	
Carbon Tetrachloride	0.0419	0.0473	0.0500	0.0500	84	95	74-127	12	18	
1,1-Dichloropropene	0.0445	0.0516	0.0500	0.0500	89	103	80-123	15	15	
Benzene	0.0476	0.0520	0.0500	0.0500	95	104	80-122	9	18	
1,2-Dichloroethane	0.0494	0.0542	0.0500	0.0500	99	108	75-124	9	15	
Trichloroethene	0.0514	0.0521	0.0500	0.0500	103	104	80-129	1	18	
1,2-Dichloropropane	0.0539	0.0540	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0499	0.0483	0.0500	0.0500	100	97	80-123	3	15	
Bromodichloromethane	0.0532	0.0533	0.0500	0.0500	106	107	80-129	0	15	
(cis) 1,3-Dichloropropene	0.0540	0.0541	0.0500	0.0500	108	108	80-130	0	15	
Methyl Isobutyl Ketone	0.0554	0.0518	0.0500	0.0500	111	104	63-137	7	27	
Toluene	0.0505	0.0497	0.0500	0.0500	101	99	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0546	0.0554	0.0500	0.0500	109	111	80-124	1	15	



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0480	0.0480	0.0500	0.0500	96	96	80-120	0	15	
Tetrachloroethene	0.0540	0.0547	0.0500	0.0500	108	109	77-126	1	15	
1,3-Dichloropropane	0.0529	0.0528	0.0500	0.0500	106	106	77-123	0	15	
2-Hexanone	0.0557	0.0517	0.0500	0.0500	111	103	53-137	7	29	
Dibromochloromethane	0.0548	0.0528	0.0500	0.0500	110	106	80-128	4	16	
1,2-Dibromoethane	0.0528	0.0514	0.0500	0.0500	106	103	80-122	3	20	
Chlorobenzene	0.0495	0.0509	0.0500	0.0500	99	102	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0504	0.0498	0.0500	0.0500	101	100	80-120	1	15	
Ethylbenzene	0.0510	0.0522	0.0500	0.0500	102	104	80-120	2	15	
m,p-Xylene	0.0990	0.102	0.100	0.100	99	102	80-120	3	15	
o-Xylene	0.0511	0.0525	0.0500	0.0500	102	105	80-120	3	15	
Styrene	0.0509	0.0531	0.0500	0.0500	102	106	80-122	4	15	
Bromoform	0.0538	0.0538	0.0500	0.0500	108	108	78-126	0	15	
Isopropylbenzene	0.0520	0.0540	0.0500	0.0500	104	108	80-125	4	15	
Bromobenzene	0.0494	0.0476	0.0500	0.0500	99	95	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0521	0.0493	0.0500	0.0500	104	99	75-122	6	17	
1,2,3-Trichloropropane	0.0502	0.0473	0.0500	0.0500	100	95	72-125	6	20	
n-Propylbenzene	0.0493	0.0492	0.0500	0.0500	99	98	77-126	0	16	
2-Chlorotoluene	0.0523	0.0508	0.0500	0.0500	105	102	75-128	3	15	
4-Chlorotoluene	0.0515	0.0507	0.0500	0.0500	103	101	78-127	2	16	
1,3,5-Trimethylbenzene	0.0502	0.0500	0.0500	0.0500	100	100	77-128	0	15	
tert-Butylbenzene	0.0502	0.0491	0.0500	0.0500	100	98	73-130	2	20	
1,2,4-Trimethylbenzene	0.0514	0.0499	0.0500	0.0500	103	100	77-125	3	16	
sec-Butylbenzene	0.0488	0.0472	0.0500	0.0500	98	94	75-130	3	17	
1,3-Dichlorobenzene	0.0519	0.0514	0.0500	0.0500	104	103	78-123	1	17	
p-Isopropyltoluene	0.0511	0.0513	0.0500	0.0500	102	103	75-130	0	18	
1,4-Dichlorobenzene	0.0520	0.0510	0.0500	0.0500	104	102	77-121	2	17	
1,2-Dichlorobenzene	0.0518	0.0511	0.0500	0.0500	104	102	80-120	1	15	
n-Butylbenzene	0.0532	0.0534	0.0500	0.0500	106	107	76-131	0	20	
1,2-Dibromo-3-chloropropane	0.0597	0.0523	0.0500	0.0500	119	105	61-137	13	28	
1,2,4-Trichlorobenzene	0.0582	0.0604	0.0500	0.0500	116	121	77-127	4	17	
Hexachlorobutadiene	0.0514	0.0512	0.0500	0.0500	103	102	77-125	0	22	
Naphthalene	0.0552	0.0519	0.0500	0.0500	110	104	68-129	6	19	
1,2,3-Trichlorobenzene	0.0527	0.0548	0.0500	0.0500	105	110	77-124	4	19	
Surrogate:										
Dibromofluoromethane					92	102	75-130			
Toluene-d8					100	99	78-128			
4-Bromofluorobenzene					107	107	71-130			



Date of Report: August 28, 2023
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 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Naphthalene	0.66	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
2-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
1-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthylene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthene	0.13	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluorene	0.25	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Phenanthrene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Anthracene	0.58	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluoranthene	4.4	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Pyrene	3.5	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	2.8	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	2.6	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo(j,k)fluoranthene	0.82	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	1.8	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Indeno(1,2,3-c,d)pyrene	0.99	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Dibenz[a,h]anthracene	0.32	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[g,h,i]perylene	0.93	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>79</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>99</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>96</i>	<i>44-121</i>				



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Naphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
2-Methylnaphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
1-Methylnaphthalene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Acenaphthylene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Acenaphthene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Fluorene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Phenanthrene	0.041	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Anthracene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Fluoranthene	0.066	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Pyrene	0.062	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[a]anthracene	0.033	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Chrysene	0.045	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[b]fluoranthene	0.049	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[j,k]fluoranthene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[a]pyrene	0.036	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Indeno(1,2,3-c,d)pyrene	0.029	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Dibenz[a,h]anthracene	ND	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Benzo[g,h,i]perylene	0.041	0.014	EPA 8270E/SIM	8-24-23	8-28-23	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	82	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



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 Project: Star Forge Waste Designation

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Naphthalene	0.12	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
2-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
1-Methylnaphthalene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthylene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Acenaphthene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluorene	ND	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Phenanthrene	0.84	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Anthracene	0.21	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Fluoranthene	1.5	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Pyrene	1.2	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	0.87	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.92	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	0.92	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[j,k]fluoranthene	0.24	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	0.61	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Indeno(1,2,3-c,d)pyrene	0.33	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Dibenz[a,h]anthracene	0.11	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[g,h,i]perylene	0.31	0.072	EPA 8270E/SIM	8-24-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	78	39-111				
Pyrene-d10	96	47-114				
Terphenyl-d14	92	44-121				



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Fluorene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	86	39-111				
Pyrene-d10	85	47-114				
Terphenyl-d14	91	44-121				



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 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0794	0.0701	0.0833	0.0833	95	84	57-116	12	16	
Acenaphthylene	0.0798	0.0766	0.0833	0.0833	96	92	59-124	4	15	
Acenaphthene	0.0748	0.0706	0.0833	0.0833	90	85	59-124	6	15	
Fluorene	0.0770	0.0713	0.0833	0.0833	92	86	62-122	8	15	
Phenanthrene	0.0747	0.0702	0.0833	0.0833	90	84	62-119	6	15	
Anthracene	0.0761	0.0739	0.0833	0.0833	91	89	64-123	3	15	
Fluoranthene	0.0743	0.0735	0.0833	0.0833	89	88	63-123	1	15	
Pyrene	0.0715	0.0708	0.0833	0.0833	86	85	62-124	1	15	
Benzo[a]anthracene	0.0756	0.0765	0.0833	0.0833	91	92	59-131	1	15	
Chrysene	0.0716	0.0689	0.0833	0.0833	86	83	61-124	4	15	
Benzo[b]fluoranthene	0.0776	0.0767	0.0833	0.0833	93	92	60-126	1	15	
Benzo(j,k)fluoranthene	0.0726	0.0697	0.0833	0.0833	87	84	63-121	4	17	
Benzo[a]pyrene	0.0781	0.0760	0.0833	0.0833	94	91	60-122	3	15	
Indeno(1,2,3-c,d)pyrene	0.0897	0.0883	0.0833	0.0833	108	106	58-127	2	15	
Dibenz[a,h]anthracene	0.0894	0.0865	0.0833	0.0833	107	104	60-124	3	15	
Benzo[g,h,i]perylene	0.0821	0.0789	0.0833	0.0833	99	95	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					88	96	39-111			
Pyrene-d10					81	85	47-114			
Terphenyl-d14					89	92	44-121			



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID:	08-254-01					
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	69	50-127				
Client ID: NT-piping-Soil-2						
Laboratory ID:	08-254-02					
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	0.11	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	78	50-127				
Client ID: NT-piping-Soil-3						
Laboratory ID:	08-254-03					
Aroclor 1016	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	0.056	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.054	EPA 8082A	8-25-23	8-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	79	50-127				



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0825S1					
Aroclor 1016	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-25-23	8-25-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	100	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-254-01									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.350	0.325	0.500	0.500	ND	70	65	41-121	7	28
Surrogate:										
DCB						75	74	50-127		



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-1						
Laboratory ID: 08-254-01						
Arsenic	ND	11	EPA 6010D	8-24-23	8-24-23	
Barium	35	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	18	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	58	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	24	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	150	2.7	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	82	2.7	EPA 6010D	8-24-23	8-24-23	

Client ID: NT-piping-Soil-2						
Laboratory ID: 08-254-02						
Arsenic	16	11	EPA 6010D	8-24-23	8-24-23	
Barium	60	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	46	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	180	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	110	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	1100	27	EPA 6010D	8-24-23	8-28-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	120	2.7	EPA 6010D	8-24-23	8-24-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-Soil-3						
Laboratory ID: 08-254-03						
Arsenic	18	11	EPA 6010D	8-24-23	8-24-23	
Barium	54	2.7	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.54	EPA 6010D	8-24-23	8-24-23	
Chromium	54	0.54	EPA 6010D	8-24-23	8-24-23	
Copper	170	1.1	EPA 6010D	8-24-23	8-24-23	
Lead	46	5.4	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.27	EPA 7471B	8-23-23	8-23-23	
Nickel	810	27	EPA 6010D	8-24-23	8-28-23	
Selenium	ND	11	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.1	EPA 6010D	8-24-23	8-24-23	
Zinc	150	2.7	EPA 6010D	8-24-23	8-24-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824SM3					
Arsenic	ND	10	EPA 6010D	8-24-23	8-24-23	
Barium	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Chromium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Copper	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.0	EPA 6010D	8-24-23	8-24-23	
Nickel	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	10	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Zinc	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Laboratory ID:	MB0823S1					
Mercury	ND	0.25	EPA 7471B	8-23-23	8-23-23	



Date of Report: August 28, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254
 Project: Star Forge Waste Designation

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-266-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	44.2	42.8	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	20.3	17.5	NA	NA	NA	NA	15	20
Copper	20.6	19.0	NA	NA	NA	NA	8	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	25.4	24.0	NA	NA	NA	NA	6	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	28.7	27.5	NA	NA	NA	NA	4	20

Laboratory ID:	08-218-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-266-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	99.9	99.3	100	100	ND	100	99	75-125	1	20
Barium	147	148	100	100	44.2	103	104	75-125	1	20
Cadmium	47.2	46.9	50.0	50.0	ND	94	94	75-125	1	20
Chromium	119	120	100	100	20.3	98	99	75-125	1	20
Copper	69.5	69.5	50.0	50.0	20.6	98	98	75-125	0	20
Lead	249	248	250	250	ND	100	99	75-125	0	20
Nickel	120	121	100	100	25.4	95	95	75-125	0	20
Selenium	95.9	96.3	100	100	ND	96	96	75-125	0	20
Silver	23.5	22.9	25.0	25.0	ND	94	91	75-125	3	20
Zinc	129	130	100	100	28.7	100	101	75-125	1	20

Laboratory ID:	08-218-01									
Mercury	0.507	0.509	0.500	0.500	0.0124	99	99	80-120	0	20



Date of Report: August 28, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254
Project: Star Forge Waste Designation

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-Soil-1	08-254-01	7	8-23-23
NT-piping-Soil-2	08-254-02	8	8-23-23
NT-piping-Soil-3	08-254-03	7	8-23-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Page 1 of 1

Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. **08-254**

Company:

DE Environmental

Project No.:

Project Name:

Star Forge Waste Disposition

Project Manager:

D. Hill

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☒ 3 Day

☐ Standard

(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

(other)

Requested Analysis

Lab ID

Sample Identification

Date
Sampled

Time
Sampled

Matrix

of
Cont.

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8) *+ Cu, Ni, Zn*

Priority Pollutant Metals (13)

TCLP Metals

VPH

EPH

% Moisture

1 NT-piping-soil-1

8/23/23

0815

Soil

4

2 NT-piping-soil-2

↓

0825

↓

↓

3 NT-piping-soil-3

↓

0835

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↓

1

RELINQUISHED BY

[Signature]

DATE

8/23/23

RECEIVED BY

[Signature]

DATE

8/23/23

COMMENTS:

FIRM

DE

TIME

1110

FIRM

COSE

TIME

1110

RELINQUISHED BY

DATE

RECEIVED BY

DATE

FIRM

TIME

FIRM

TIME

REVIEWED BY

DATE REVIEWED

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Waste Designation
Laboratory Reference No. 2308-254B

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254B
Project: Star Forge Waste Designation

Case Narrative

Samples were collected on August 23, 2023 and received by the laboratory on August 23, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 5, 2023
Samples Submitted: August 23, 2023
Laboratory Reference: 2308-254B
Project: Star Forge Waste Designation

TCLP LEAD
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-piping-Soil-2					
Laboratory ID:	08-254-02					
Lead	ND	0.20	EPA 6010D	8-30-23	8-30-23	



Date of Report: September 5, 2023
 Samples Submitted: August 23, 2023
 Laboratory Reference: 2308-254B
 Project: Star Forge Waste Designation

**TCLP LEAD
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0830TM1					
Lead	ND	0.20	EPA 6010D	8-30-23	8-30-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-071-13							
	ORIG	DUP						
Lead	6.46	6.43	NA	NA	NA	NA	1	20

MATRIX SPIKES

Laboratory ID:	08-071-13									
	MS	MSD	MS	MSD		MS	MSD			
Lead	16.1	15.9	10.0	10.0	6.46	96	94	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
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- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Dangerous Waste Characterization

Sample ID: NT-Piping-Soil-2

Report date: September 4, 2023

Submitted to:

OnSite Environmental

14648 NE 95th Street

Redmond, WA 98052

Rainier Environmental
5013 Pacific Hwy East
Suite 20
Tacoma, WA 98424

1.0 INTRODUCTION

A dangerous waste characterization using the test organism *Oncorhynchus mykiss* (rainbow trout) was conducted on one sample submitted by OnSite Environmental to Rainier Environmental. Testing was conducted following the Washington State Department of Ecology Publication 80-12.

2.0 METHODS

The sample, NT-Piping-Soil-2, was received in the laboratory on August 30, 2023. Upon arrival at the laboratory the sample was inspected and contents verified against information provided on the chain-of-custody form. The sample was stored at 4°C in the dark until use. The test procedure is outlined in Table 1.

Table 1. Summary of Dangerous Waste Characterization Test Conditions

Parameter	Standard Fish Toxicity Test
Test number	2308-063
Sample ID	NT-Piping-Soil-2
Test initiation date; time	8/31/2023; 1200h
Test termination date; time	9/4/2023; 1200h
Endpoint	Mortality at 96-hours
Test chamber	7.5 L Plastic tank
Test temperature	12 ± 1°C
Dilution water	Moderately hard synthetic water
Test solution volume	6 L
Test concentrations (mg/L)	100, 10, 0
Number of organisms/chamber	10
Number of replicates	3
Test organism	<i>Oncorhynchus mykiss</i> (rainbow trout)
Feeding	No feeding during test
Photoperiod	16 hours light/ 8 hours dark
Extraction	Rotary agitation (30 +/- 2 rpm) for 18 hours
Reference Toxicant	Copper sulfate
Deviations	None

The test organisms used in the test are outlined in Table 2. The sample was tested using fish received on July 12, 2023.

Table 2. Test organisms (*Oncorhynchus mykiss*)

Test organism age	70 days post swim-up (hatch date 5/31/2023)
Mean weight	0.42 g
Mean length	42 mm
Ratio of longest to shortest	1.2
Loading	0.70 g/L
Test organism source	Trout Lodge; Sumner, WA

3.0 RESULTS

A summary of results for the dangerous waste characterization conducted on NT-Piping-Soil-2 is contained in Table 3. There was no mortality during the test. Based on these results, the sample does not designate as either a dangerous or extremely hazardous waste. Copies of the laboratory bench sheets, statistical summaries of reference toxicant tests, and chain-of-custody form are provided in Appendices A through C.

Table 3. Summary of Results

Sample ID	Concentration (mg/L)	Survival (# fish, N=30)	Percent Mortality	Dangerous Waste Designation
Control	0	30	0	NA
NT-Piping-Soil-2	10	30	0	None
	100	30	0	

4.0 QUALITY ASSURANCE

The most recently completed reference toxicant test was initiated August 16, 2023. The LC₅₀ of 166 µg/L copper fell within the acceptable range of mean ± two standard deviations of historical test results indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the last 20 tests was 31.3 percent, which is considered excellent by the Biomonitoring Science Advisory Board.

5.0 REFERENCES

- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised June 2016.
- WDOE. 2020. Biological Testing Methods 80-12 for the Designation of Dangerous Waste. Washington State Department of Ecology. Hazardous Waste and Toxics Reduction Program. Publication number: 80-12, Revised September 2020.

Appendix A
Oncorhynchus mykiss Dangerous Waste Toxicity Test
Raw Bench Sheets

Appendix B
Reference Toxicant Test
Control Chart and Statistical Summary

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Test Type: Survival (96h)

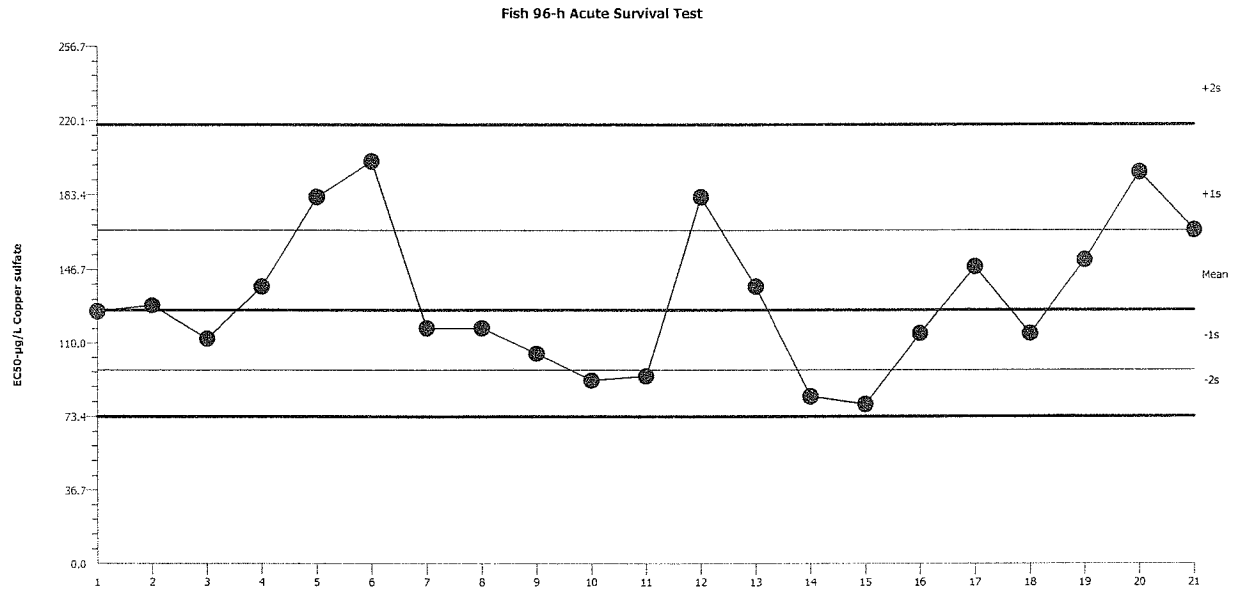
Organism: Oncorhynchus mykiss (Rainbow Tro

Material: Copper sulfate

Protocol: Not Applicable

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF



Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Dec	6	126	-0.4773	-0.01388			13-8732-0751	08-1557-4326
2	2022	Jan	5	128.9	2.468	0.07094			08-2261-8669	03-7761-6146
3		Feb	5	112.2	-14.22	-0.438			01-7899-0440	09-8784-8920
4		Mar	7	138.2	11.72	0.3254			15-8880-5349	18-5703-0746
5		Apr	11	182.3	55.88	1.343	(+)		19-4475-1025	00-2732-4149
6		May	11	200	73.53	1.683	(+)		04-3686-1214	17-7144-4708
7		Jun	13	117.6	-8.915	-0.2683			02-1194-6933	14-6655-2671
8		Jul	11	117.6	-8.915	-0.2683			18-9490-6426	20-8229-8763
9		Aug	12	104.7	-21.74	-0.6924			16-1269-6384	20-8498-8487
10		Sep	14	91.17	-35.3	-1.201	(-)		21-3997-4244	00-3631-7496
11		Oct	10	93.3	-33.17	-1.117	(-)		01-3925-6404	03-9134-1193
12		Nov	14	182.3	55.88	1.343	(+)		09-0829-7750	07-1545-0995
13		Dec	12	138.2	11.72	0.3254			02-0643-2090	02-3247-9401
14	2023	Jan	12	83.12	-43.35	-1.541	(-)		10-5717-9012	06-2162-7195
15		Feb	13	79.37	-47.1	-1.71	(-)		19-2977-9552	20-0081-1333
16		Mar	13	114.9	-11.6	-0.3532			14-1992-9075	20-3196-8530
17		Apr	14	148.1	21.64	0.5799			00-0643-4903	11-5830-8594
18		May	15	114.9	-11.6	-0.3532			06-5181-9947	15-0207-5859
19		Jun	13	151.6	25.1	0.6647			16-7900-9504	12-9379-3365
20		Jul	14	194.7	68.27	1.585	(+)		19-5463-0764	04-3793-4724
21		Aug	16	166.2	39.78	1.004	(+)		09-9289-7634	17-7520-8601

CETIS Summary Report

Report Date: 21 Aug-23 10:41 (p 1 of 1)
 Test Code: RA081623OM | 09-9289-7634

Fish 96-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID:	10-3512-0978	Test Type:	Survival (96h)	Analyst:	Eric Tollefson
Start Date:	16 Aug-23 13:30	Protocol:	Not Applicable	Diluent:	Mod-Hard Synthetic Water
Ending Date:	20 Aug-23 13:30	Species:	Oncorhynchus mykiss	Brine:	
Duration:	96h	Source:	Trout Lodge Fish Farm	Age:	55d
Sample ID:	09-7638-9830	Code:	RA081623OM	Client:	Internal Lab
Sample Date:	16 Aug-23	Material:	Copper sulfate	Project:	
Receive Date:	16 Aug-23	Source:	Reference Toxicant		
Sample Age:	14h	Station:	In House		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-5429-9781	96h Survival Rate	50	100	70.71	16.9%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-7520-8601	96h Survival Rate	LC50	166.2	141.5	195.3		Spearman-Kärber

96h Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	3	1	1	1	1	1	0	0	0.0%	0.0%
25		3	1	1	1	1	1	0	0	0.0%	0.0%
50		3	1	1	1	1	1	0	0	0.0%	0.0%
100		3	0.8	0.7627	0.8373	0.7	0.9	0.05774	0.1	12.5%	20.0%
200		3	0.4333	0.3394	0.5273	0.2	0.7	0.1453	0.2517	58.08%	56.67%
400		3	0	0	0	0	0	0	0		100.0%

96h Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	1	1	1
25		1	1	1
50		1	1	1
100		0.9	0.7	0.8
200		0.4	0.7	0.2
400		0	0	0

96h Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3
0	Dilution Water	10/10	10/10	10/10
25		10/10	10/10	10/10
50		10/10	10/10	10/10
100		9/10	7/10	8/10
200		4/10	7/10	2/10
400		0/10	0/10	0/10

Appendix C
Chain-of-Custody Form



Laboratory Reference #: 08-254

Turnaround Request

1 Day 2 Day 3 Day

Project Number: Star Forge Waste Designation

Other: 1 Week

Project Name:

[illegible]



08-254

% Moisture

$$(1 \text{ Day})^{-1} \text{Clp}$$
Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 17, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2310-177

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 13, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on October 13, 2023 and received by the laboratory on October 13, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Chloroethane, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Gasoline Range Organics	220	7.8	NWTPH-Gx	10-16-23	10-16-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Gasoline	ND	4.8	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Gasoline	ND	4.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				



Date of Report: October 17, 2023
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Gasoline	ND	5.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-177-03							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				93	90	65-126		



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-122				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	74	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-160-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				75	73	65-122		



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Diesel Fuel #2	3400	140	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	860	290	NWTPH-Dx	10-16-23	10-16-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	129	50-150				

Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Diesel Range Organics	120	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	260	56	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				

Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Diesel Range Organics	ND	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	190	55	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
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 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Diesel Range Organics	ND	25	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	78	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-177-01									
	ORIG	DUP								
Diesel Fuel #2	2970	2830	NA	NA		NA	NA	5	40	
Lube Oil	759	801	NA	NA		NA	NA	5	40	
Surrogate:										
o-Terphenyl						129	121	50-150		



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Dichlorodifluoromethane	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Toluene	0.40	0.18	EPA 8260D	10-16-23	10-16-23	



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
(trans) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	0.46	0.037	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	2.1	0.073	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.87	0.037	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0041	EPA 8260D	10-16-23	10-16-23	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0016	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.0012	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0015	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-130</i>				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	



Date of Report: October 17, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0020	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	96	71-130				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0382	0.0378	0.0500	0.0500	76	76	30-160	1	26	
Chloromethane	0.0437	0.0437	0.0500	0.0500	87	87	59-131	0	26	
Vinyl Chloride	0.0387	0.0382	0.0500	0.0500	77	76	68-136	1	23	
Bromomethane	0.0439	0.0437	0.0500	0.0500	88	87	48-155	0	32	
Chloroethane	0.0471	0.0468	0.0500	0.0500	94	94	67-141	1	16	
Trichlorofluoromethane	0.0490	0.0484	0.0500	0.0500	98	97	76-127	1	19	
1,1-Dichloroethene	0.0469	0.0478	0.0500	0.0500	94	96	75-129	2	19	
Iodomethane	0.0454	0.0433	0.0500	0.0500	91	87	37-140	5	27	
Methylene Chloride	0.0470	0.0482	0.0500	0.0500	94	96	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0475	0.0481	0.0500	0.0500	95	96	79-133	1	15	
Methyl t-Butyl Ether	0.0520	0.0531	0.0500	0.0500	104	106	73-125	2	17	
1,1-Dichloroethane	0.0472	0.0473	0.0500	0.0500	94	95	79-125	0	17	
2,2-Dichloropropane	0.0478	0.0492	0.0500	0.0500	96	98	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0469	0.0473	0.0500	0.0500	94	95	75-131	1	15	
Bromochloromethane	0.0509	0.0521	0.0500	0.0500	102	104	80-126	2	15	
Chloroform	0.0474	0.0480	0.0500	0.0500	95	96	80-123	1	15	
1,1,1-Trichloroethane	0.0472	0.0478	0.0500	0.0500	94	96	78-124	1	21	
Carbon Tetrachloride	0.0480	0.0481	0.0500	0.0500	96	96	74-127	0	18	
1,1-Dichloropropene	0.0470	0.0480	0.0500	0.0500	94	96	80-123	2	15	
Benzene	0.0462	0.0459	0.0500	0.0500	92	92	80-122	1	18	
1,2-Dichloroethane	0.0502	0.0515	0.0500	0.0500	100	103	75-124	3	15	
Trichloroethene	0.0470	0.0473	0.0500	0.0500	94	95	80-129	1	18	
1,2-Dichloropropane	0.0481	0.0489	0.0500	0.0500	96	98	80-123	2	15	
Dibromomethane	0.0494	0.0512	0.0500	0.0500	99	102	80-123	4	15	
Bromodichloromethane	0.0495	0.0491	0.0500	0.0500	99	98	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0515	0.0521	0.0500	0.0500	103	104	80-130	1	15	
Toluene	0.0441	0.0446	0.0500	0.0500	88	89	80-120	1	18	
(trans) 1,3-Dichloropropene	0.0561	0.0567	0.0500	0.0500	112	113	80-124	1	15	



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0539	0.0576	0.0500	0.0500	108	115	80-120	7	15	
Tetrachloroethene	0.0515	0.0520	0.0500	0.0500	103	104	77-126	1	15	
1,3-Dichloropropane	0.0530	0.0554	0.0500	0.0500	106	111	77-123	4	15	
Dibromochloromethane	0.0549	0.0565	0.0500	0.0500	110	113	80-128	3	16	
1,2-Dibromoethane	0.0551	0.0570	0.0500	0.0500	110	114	80-122	3	20	
Chlorobenzene	0.0513	0.0523	0.0500	0.0500	103	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0521	0.0533	0.0500	0.0500	104	107	80-120	2	15	
Ethylbenzene	0.0504	0.0511	0.0500	0.0500	101	102	80-120	1	15	
m,p-Xylene	0.105	0.105	0.100	0.100	105	105	80-120	0	15	
o-Xylene	0.0519	0.0520	0.0500	0.0500	104	104	80-120	0	15	
Bromoform	0.0553	0.0584	0.0500	0.0500	111	117	78-126	5	15	
Bromobenzene	0.0525	0.0538	0.0500	0.0500	105	108	79-124	2	15	
1,1,2,2-Tetrachloroethane	0.0535	0.0563	0.0500	0.0500	107	113	75-122	5	17	
1,2,3-Trichloropropane	0.0560	0.0589	0.0500	0.0500	112	118	72-125	5	20	
2-Chlorotoluene	0.0525	0.0526	0.0500	0.0500	105	105	75-128	0	15	
4-Chlorotoluene	0.0556	0.0577	0.0500	0.0500	111	115	78-127	4	16	
1,3-Dichlorobenzene	0.0526	0.0538	0.0500	0.0500	105	108	78-123	2	17	
1,4-Dichlorobenzene	0.0547	0.0548	0.0500	0.0500	109	110	77-121	0	17	
1,2-Dichlorobenzene	0.0562	0.0569	0.0500	0.0500	112	114	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0569	0.0647	0.0500	0.0500	114	129	61-137	13	28	
1,2,4-Trichlorobenzene	0.0543	0.0530	0.0500	0.0500	109	106	77-127	2	17	
Hexachlorobutadiene	0.0456	0.0463	0.0500	0.0500	91	93	77-125	2	22	
1,2,3-Trichlorobenzene	0.0584	0.0593	0.0500	0.0500	117	119	77-124	2	19	
Surrogate:										
Dibromofluoromethane					98	97	75-130			
Toluene-d8					95	95	78-128			
4-Bromofluorobenzene					106	108	71-130			



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>78-125</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



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QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD		Flags
					Recovery		Limits		RPD	Limit	
SPIKE BLANKS											
Laboratory ID:	SB1016W1										
	SB	SBD	SB	SBD	SB	SBD					
Dichlorodifluoromethane	11.4	9.59	10.0	10.0	114	96	34-166	17	21		
Chloromethane	7.69	6.63	10.0	10.0	77	66	63-138	15	18		
Vinyl Chloride	9.12	8.03	10.0	10.0	91	80	71-135	13	20		
Bromomethane	11.4	10.1	10.0	10.0	114	101	20-151	12	36		
Chloroethane	8.59	7.29	10.0	10.0	86	73	76-125	16	20	I	
Trichlorofluoromethane	10.3	9.42	10.0	10.0	103	94	75-131	9	19		
1,1-Dichloroethene	10.1	9.00	10.0	10.0	101	90	78-125	12	19		
Iodomethane	13.3	12.1	10.0	10.0	133	121	10-155	9	40		
Methylene Chloride	9.44	8.62	10.0	10.0	94	86	80-120	9	15		
(trans) 1,2-Dichloroethene	9.52	8.82	10.0	10.0	95	88	80-125	8	17		
Methyl t-Butyl Ether	10.1	9.23	10.0	10.0	101	92	80-122	9	15		
1,1-Dichloroethane	9.61	8.69	10.0	10.0	96	87	80-125	10	17		
2,2-Dichloropropane	11.5	10.9	10.0	10.0	115	109	80-146	5	21		
(cis) 1,2-Dichloroethene	10.0	9.32	10.0	10.0	100	93	80-129	7	17		
Bromochloromethane	9.81	9.31	10.0	10.0	98	93	80-125	5	18		
Chloroform	9.93	9.12	10.0	10.0	99	91	80-123	9	16		
1,1,1-Trichloroethane	10.1	9.13	10.0	10.0	101	91	80-123	10	18		
Carbon Tetrachloride	10.4	9.59	10.0	10.0	104	96	80-126	8	17		
1,1-Dichloropropene	10.0	9.31	10.0	10.0	100	93	80-126	7	18		
Benzene	9.37	8.53	10.0	10.0	94	85	80-121	9	16		
1,2-Dichloroethane	11.1	10.3	10.0	10.0	111	103	80-124	7	15		
Trichloroethene	10.5	9.54	10.0	10.0	105	95	80-122	10	18		
1,2-Dichloropropane	9.46	8.85	10.0	10.0	95	89	80-123	7	15		
Dibromomethane	10.4	9.64	10.0	10.0	104	96	80-123	8	15		
Bromodichloromethane	10.8	9.70	10.0	10.0	108	97	80-125	11	15		
(cis) 1,3-Dichloropropene	10.6	9.81	10.0	10.0	106	98	80-129	8	15		
Toluene	9.63	9.18	10.0	10.0	96	92	80-120	5	18		
(trans) 1,3-Dichloropropene	11.9	11.1	10.0	10.0	119	111	80-134	7	17		



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**VOLATILE ORGANICS EPA 8260D
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Analyte	Result		Spike Level		Percent		Recovery	RPD	RPD	Flags
					Recovery		Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB1016W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	9.87	10.0	10.0	100	99	77-126	1	20	
Tetrachloroethene	11.5	11.0	10.0	10.0	115	110	80-124	4	18	
1,3-Dichloropropane	10.5	10.1	10.0	10.0	105	101	80-120	4	15	
Dibromochloromethane	11.5	10.6	10.0	10.0	115	106	80-128	8	15	
1,2-Dibromoethane	11.6	10.6	10.0	10.0	116	106	80-127	9	15	
Chlorobenzene	11.2	11.0	10.0	10.0	112	110	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.2	10.9	10.0	10.0	112	109	80-125	3	17	
Ethylbenzene	11.0	10.6	10.0	10.0	110	106	80-125	4	18	
m,p-Xylene	22.3	21.7	20.0	20.0	112	109	80-127	3	18	
o-Xylene	10.9	10.7	10.0	10.0	109	107	80-126	2	18	
Bromoform	12.6	12.0	10.0	10.0	126	120	80-130	5	15	
Bromobenzene	11.1	10.5	10.0	10.0	111	105	76-128	6	16	
1,1,2,2-Tetrachloroethane	10.3	10.3	10.0	10.0	103	103	74-130	0	15	
1,2,3-Trichloropropane	9.95	9.79	10.0	10.0	100	98	71-129	2	25	
2-Chlorotoluene	11.2	11.4	10.0	10.0	112	114	80-128	2	18	
4-Chlorotoluene	11.4	11.2	10.0	10.0	114	112	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.4	10.0	10.0	116	114	80-126	2	17	
1,4-Dichlorobenzene	11.3	11.3	10.0	10.0	113	113	80-121	0	17	
1,2-Dichlorobenzene	11.4	11.3	10.0	10.0	114	113	79-125	1	15	
1,2-Dibromo-3-chloropropane	11.7	11.4	10.0	10.0	117	114	73-133	3	15	
1,2,4-Trichlorobenzene	13.6	14.5	10.0	10.0	136	145	80-139	6	18	I
Hexachlorobutadiene	12.8	13.1	10.0	10.0	128	131	80-151	2	18	
1,2,3-Trichlorobenzene	13.9	15.1	10.0	10.0	139	151	75-146	8	28	I
Surrogate:										
Dibromofluoromethane					104	102	75-127			
Toluene-d8					111	109	80-127			
4-Bromofluorobenzene					100	103	78-125			



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Naphthalene	2.1	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	6.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
1-Methylnaphthalene	4.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
Benzo[a]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.071	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.045	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.034	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	69	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	76	44-121				

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Naphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.11	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.18	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.056	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.16	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.031	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Naphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.57	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.59	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.68	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.23	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.63	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.37	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.088	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	87	47-114				
Terphenyl-d14	92	44-121				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>80</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>44-121</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0700	0.0664	0.0833	0.0833	84	80	57-116	5	16	
Acenaphthylene	0.0796	0.0743	0.0833	0.0833	96	89	59-124	7	15	
Acenaphthene	0.0749	0.0709	0.0833	0.0833	90	85	59-124	5	15	
Fluorene	0.0739	0.0752	0.0833	0.0833	89	90	62-122	2	15	
Phenanthrene	0.0685	0.0776	0.0833	0.0833	82	93	62-119	12	15	
Anthracene	0.0749	0.0863	0.0833	0.0833	90	104	64-123	14	15	
Fluoranthene	0.0757	0.0820	0.0833	0.0833	91	98	63-123	8	15	
Pyrene	0.0772	0.0822	0.0833	0.0833	93	99	62-124	6	15	
Benzo[a]anthracene	0.0756	0.0754	0.0833	0.0833	91	91	59-131	0	15	
Chrysene	0.0784	0.0790	0.0833	0.0833	94	95	61-124	1	15	
Benzo[b]fluoranthene	0.0783	0.0764	0.0833	0.0833	94	92	60-126	2	15	
Benzo(j,k)fluoranthene	0.0827	0.0847	0.0833	0.0833	99	102	63-121	2	17	
Benzo[a]pyrene	0.0783	0.0785	0.0833	0.0833	94	94	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0760	0.0777	0.0833	0.0833	91	93	58-127	2	15	
Dibenz[a,h]anthracene	0.0833	0.0849	0.0833	0.0833	100	102	60-124	2	15	
Benzo[g,h,i]perylene	0.0808	0.0817	0.0833	0.0833	97	98	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					80	76	39-111			
Pyrene-d10					83	88	47-114			
Terphenyl-d14					92	92	44-121			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Aroclor 1016	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1016S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.428	0.432	0.500	0.500	N/A	86	86	55-119	1	34	
Surrogate:											
DCB						92	91	50-127			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Arsenic	31	11	EPA 6010D	10-13-23	10-13-23	
Barium	82	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	0.85	0.57	EPA 6010D	10-13-23	10-13-23	
Chromium	25	0.57	EPA 6010D	10-13-23	10-13-23	
Copper	67	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	49	5.7	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	94	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	280	2.8	EPA 6010D	10-13-23	10-13-23	

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	41	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	55	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	56	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	64	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	44	2.8	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	33	2.7	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	20	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	30	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.27	EPA 7471B	10-16-23	10-16-23	
Nickel	58	2.7	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	43	2.7	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013SM1					
Arsenic	ND	10	EPA 6010D	10-13-23	10-13-23	
Barium	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Chromium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Copper	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Lead	ND	5.0	EPA 6010D	10-13-23	10-13-23	
Nickel	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	10	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Zinc	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Laboratory ID:	MB1016S1					
Mercury	ND	0.25	EPA 7471B	10-16-23	10-16-23	



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-091-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	18.0	17.5	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	9.65	9.10	NA	NA	NA	NA	6	20
Copper	16.6	17.8	NA	NA	NA	NA	7	20
Lead	24.5	27.9	NA	NA	NA	NA	13	20
Nickel	7.25	7.35	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	43.8	42.7	NA	NA	NA	NA	3	20

Laboratory ID:	10-089-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-091-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	102	101	100	100	ND	102	101	75-125	1	20
Barium	116	115	100	100	18.0	98	97	75-125	1	20
Cadmium	47.3	46.4	50.0	50.0	ND	95	93	75-125	2	20
Chromium	109	107	100	100	9.65	100	97	75-125	2	20
Copper	67.1	65.7	50.0	50.0	16.6	101	98	75-125	2	20
Lead	282	275	250	250	24.5	103	100	75-125	2	20
Nickel	108	105	100	100	7.25	101	98	75-125	2	20
Selenium	94.0	93.1	100	100	ND	94	93	75-125	1	20
Silver	24.6	24.0	25.0	25.0	ND	98	96	75-125	2	20
Zinc	139	139	100	100	43.8	95	95	75-125	0	20

Laboratory ID:	10-089-02									
Mercury	0.509	0.527	0.500	0.500	0.0446	93	97	80-120	3	20



Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
ST-piping-SS-20-6.5	10-177-01	12	10-13-23
ST-piping-SS-21-2.0	10-177-02	10	10-13-23
ST-piping-SS-22-2.0	10-177-03	9	10-13-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
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[illegible]

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report

August 01, 2023 to October 24, 2023
Specific Contract(s) : 'TB11606b'

All Facilities

TB11606B

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
08/14/2023 I	3A 5329271	015590 - Construction Group Interna	7331	Cont Soil	0.00 S	29.52 TN						
08/14/2023 I	3A 5329272	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	34.75 TN						
08/14/2023 I	3A 5329281	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	31.54 TN						
08/14/2023 I	3A 5329292	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	28.76 TN						
08/14/2023 I	3A 5329296	015590 - Construction Group Interna	7331	Cont Soil	0.00 S	30.56 TN						
08/15/2023 I	3A 5329304	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	30.60 TN						
08/15/2023 I	3A 5329310	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	30.86 TN						
08/15/2023 I	3A 5329343	015590 - Construction Group Interna	0332	Cont Soil	0.00 S	23.02 TN						
08/22/2023 I	3A 5329493	015590 - Construction Group Interna	3516	Cont Soil	0.00 S	22.49 TN						
08/23/2023 I	3A 5329573	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	20.35 TN						
08/23/2023 I	3A 5329577	015590 - Construction Group Interna	0331	Cont Soil	0.00 S	21.72 TN						
08/24/2023 I	3A 5329589	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	23.19 TN						
08/25/2023 I	3A 5329593	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	26.79 TN						
08/26/2023 I	3A 5329685	015590 - Construction Group Interna	5227	Cont Soil	0.00 S	24.10 TN						
08/26/2023 I	3A 5329688	015590 - Construction Group Interna	5833	Cont Soil	0.00 S	23.38 TN						
08/26/2023 I	3A 5329695	015590 - Construction Group Interna	7329	Cont Soil	0.00 S	26.68 TN						
08/31/2023 I	3A 5329813	015590 - Construction Group Interna	WSB	Trucking	160.00 F	13.50 HR						
08/31/2023 I	3A 5329866	015590 - Construction Group Interna	WSB	Trucking	160.00 F	8.00 HR						
10/20/2023 I	3A 5331130	015590 - Construction Group Interna	2234	Cont Soil	0.00 S	19.51 TN						
10/24/2023 I	3A 5331165	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	16.04 TN						
10/24/2023 I	3A 5331176	015590 - Construction Group Interna	3517	Cont Soil	0.00 S	14.51 TN						
10/24/2023 I	3A 5331181	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	21.14 TN						
10/24/2023 I	3A 5331184	015590 - Construction Group Interna	3517	Cont Soil	0.00 S	17.86 TN						
10/24/2023 I	3A 5331192	015590 - Construction Group Interna	7748	Cont Soil	0.00 S	19.80 TN						

Tickets Reported: 24 Items Reported: 24

Material Summary	Weight			Volume			Count		Billing Quantity	Material Total	Tax Total	Total
	Inbound	Outbound		Inbound	Outbound		Inbound	Outbound				
66 - Cont Soil	537.17	0.00 TN		587.15	0.00 YD		0.00	0.00	537.17 TN			
TR - Trucking	0.00	0.00 TN		0.00	0.00 YD		21.50	0.00	21.50 HR			

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report
August 01, 2023 to October 24, 2023
Specific Contract(s) : 'TB11606b'

All Facilities

Tickets Reported:		24	Items Reported:		24	Cash Totals:
						Invoice Totals:
						Report Totals:

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Facilities

All Ticket Types

History and Waiting

* - Confirmed Qty Applied to Billing

TB-11606

Ticket Date	Facility & Ticket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
08/11/2023	I 01 1016015	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		21.63 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016017	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		21.07 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016022	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.74 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016024	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		18.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016028	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.66 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016030	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.64 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016032	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016033	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.72 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016036	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.72 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016038	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.18 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016043	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.82 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016044	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		17.24 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016047	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.30 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016048	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		11.36 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016052	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.61 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016053	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.08 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016058	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		17.12 TN	0.00	\$0.00	\$0.00			
08/11/2023	I 01 1016059	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.42 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016077	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		14.45 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016078	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.60 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016079	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		14.01 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016081	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.14 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016082	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		14.38 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016085	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.96 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016087	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		15.61 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016088	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.92 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016093	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		15.79 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016094	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.37 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016095	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.47 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016100	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016101	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		14.30 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016102	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		20.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016108	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.09 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016111	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		16.18 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016112	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		17.69 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016117	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL		16.41 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016119	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL		15.51 TN	0.00	\$0.00	\$0.00			
08/14/2023	I 01 1016120	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL		16.10 TN	0.00	\$0.00	\$0.00			

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08/14/2023	I	01	1016121	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016123	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.07	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016125	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.14	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016130	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.60	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016131	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016132	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	18.35	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016137	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.94	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016138	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.39	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016141	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	18.58	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016142	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.05	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016146	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.90	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016147	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.05	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016150	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.28	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016153	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.15	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016155	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.76	TN	0.00	\$0.00	\$0.00
08/14/2023	I	01	1016157	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.05	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016163	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.05	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016164	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.90	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016165	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.43	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016167	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.62	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016168	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.54	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016169	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.47	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016170	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.04	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016171	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.39	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016172	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.17	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016174	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.70	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016178	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	10.83	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016179	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	12.70	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016180	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.78	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016183	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.00	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016184	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.61	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016185	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.77	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016190	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.91	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016191	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.92	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016192	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.10	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016197	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.37	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016198	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.11	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016199	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.86	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016205	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.66	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016206	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.02	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016207	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.32	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016209	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.19	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016210	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.94	TN	0.00	\$0.00	\$0.00

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08/15/2023	I	01	1016211	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.47	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016216	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.63	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016217	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.11	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016218	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.15	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016219	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.30	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016220	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.83	TN	0.00	\$0.00	\$0.00
08/15/2023	I	01	1016221	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.63	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016226	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.17	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016227	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.21	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016229	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.17	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016230	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.12	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016231	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016232	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016233	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.66	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016234	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.79	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016238	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.26	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016240	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.25	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016242	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.64	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016245	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.76	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016246	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.93	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016247	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.83	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016254	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.75	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016255	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.58	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016257	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.43	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016261	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.75	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016263	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	18.65	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016265	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.29	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016271	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.96	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016272	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016274	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.55	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016280	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.68	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016281	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.32	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016282	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.84	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016283	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	17.23	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016284	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.58	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016285	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.33	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016291	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.53	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016292	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.83	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016293	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.57	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016296	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	17.48	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016297	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.91	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016298	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016300	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.63	TN	0.00	\$0.00	\$0.00

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08/16/2023	I	01	1016301	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.52	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016303	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.15	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016304	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	16.64	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016305	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.85	TN	0.00	\$0.00	\$0.00
08/16/2023	I	01	1016306	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	16.25	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016309	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	17.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016310	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	16.18	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016311	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.79	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016312	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.39	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016313	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	16.13	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016314	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.77	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016315	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	16.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016316	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	15.27	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016317	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.88	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016318	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	16.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016321	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	14.74	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016322	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	16.96	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016323	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	16.49	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016324	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.74	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016325	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.93	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016326	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	9.94	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016328	015590 - Construction Group Internal	1 WA UND	SW-CONT SOIL	12.80	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016329	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	12.35	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016330	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.52	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016331	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.73	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016332	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.10	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016336	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	12.39	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016338	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.18	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016340	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.42	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016342	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.19	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016343	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.82	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016346	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.53	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016347	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.85	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016348	015590 - Construction Group Internal	101 WA UN	SW-CONT SOIL	14.31	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016349	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016350	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.24	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016351	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	14.67	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016353	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.62	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016357	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	12.24	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016358	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.06	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016359	015590 - Construction Group Internal	101 WA UN	SW-CONT SOIL	11.20	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016360	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.82	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016361	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.48	TN	0.00	\$0.00	\$0.00

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Ticket Types

History and Waiting

All Facilities

* - Confirmed Qty Applied to Billing

08/17/2023	I	01	1016362	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016363	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.22	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016364	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.86	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016365	015590 - Construction Group Internal	101 WA UM	SW-CONT SOIL	12.54	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016367	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.59	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016369	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	12.01	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016372	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.08	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016373	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.25	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016374	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.98	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016375	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	14.20	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016376	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.59	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016377	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.22	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016379	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.61	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016380	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	15.03	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016381	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	10.91	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016382	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.71	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016384	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.77	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016385	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.97	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016386	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.99	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016387	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.48	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016388	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.61	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016389	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.09	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016390	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	13.07	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016391	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	17.79	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016392	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.66	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016393	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.04	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016394	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.28	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016395	015590 - Construction Group Internal	101 WA UM	SW-CONT SOIL	14.29	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016396	015590 - Construction Group Internal	1 ABOVE G	SW-CONT SOIL	15.28	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016397	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	14.36	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016398	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.76	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016399	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	13.58	TN	0.00	\$0.00	\$0.00
08/17/2023	I	01	1016400	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.83	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016424	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.80	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016425	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.33	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016426	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	13.43	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016427	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.32	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016428	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.87	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016429	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.53	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016430	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.94	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016431	015590 - Construction Group Internal	T-2 TONGU	SW-CONT SOIL	10.54	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016433	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.83	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016434	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	11.59	TN	0.00	\$0.00	\$0.00

Detail Contract Activity Report

August 01, 2023 to August 23, 2023

Specific Contract(s) : 'tb-11606'

All Facilities

All Ticket Types
History and Waiting

* - Confirmed Qty Applied to Billing

08/21/2023	I	01	1016435	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.07	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016436	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	13.16	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016438	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	11.13	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016439	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	10.75	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016440	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.26	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016441	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	11.37	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016443	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	10.03	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016444	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	9.39	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016445	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	9.73	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016447	015590 - Construction Group Internal	T2 TONGU	SW-CONT SOIL	8.76	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016448	015590 - Construction Group Internal	1 LR TRUC	SW-CONT SOIL	8.12	TN	0.00	\$0.00	\$0.00
08/21/2023	I	01	1016449	015590 - Construction Group Internal	19 PNW GF	SW-CONT SOIL	7.80	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016482	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	15.96	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016483	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.20	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016484	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.07	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016485	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	11.64	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016488	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	11.22	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016489	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	8.01	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016490	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.72	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016491	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	10.12	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016494	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	17.56	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016495	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016497	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.68	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016498	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	11.40	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016500	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	18.29	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016501	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.03	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016503	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	20.25	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016504	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.80	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016506	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	21.12	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016508	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	17.06	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016509	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	14.93	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016511	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	15.59	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016513	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	13.14	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016514	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	13.29	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016516	015590 - Construction Group Internal	5 H.E.I.	SW-CONT SOIL	12.19	TN	0.00	\$0.00	\$0.00
08/23/2023	I	01	1016517	015590 - Construction Group Internal	T3 TONGU	SW-CONT SOIL	14.73	TN	0.00	\$0.00	\$0.00

Tickets Reported: 246 Items Reported: 246

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

Detail Contract Activity Report
August 01, 2023 to August 23, 2023
Specific Contract(s) : 'tb-11606'

All Facilities

Material Summary		Weight		Volume		Count		Billing	Material Total	Tax Total	Total
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Quantity			
VG - SW-CONT SOIL		3,545.42	0.00 TN	0.00	0.00 YD	0.00	0.00	3,545.42 TN			
								Cash Totals:			
								Invoice Totals:			
								Report Totals:			



DANGEROUS WASTE DESIGNATION FORM

Former Jorgensen Forge Site, UST Piping Utilidor Water

A. WASTE STREAM NAME AND GENERATION INFORMATION

Waste Stream Name: **Water**

Generation Process: **Pump out of UST Piping Utilidor**

RCRA ID Number that waste will be managed under:

NA

Total Quantity and/or Estimated Generation rate:

~ 275 gallons

Other Descriptions (i.e. Shop, Project, Etc.):

B. WASTE PROPERTIES, CHARACTERISTICS, and CONSTITUENTS:

Physical State: ☐ Solid (pass paint filter)
☐ Solid w/freestanding or absorbed liquid
☒ Liquid (If liquid, indicate if the liquid is:
☒ Single Layer
☐ Multi-layer

pH: ☐ < 2 **[D002]**
☒ > 2 but < 12.5
☐ N/A ☐ > 12.5 **[D002]**

Flashpoint: ☐ < 140 °F **[D001]**
☒ > 140 °F but < 200 °F
☐ > 200 °F

Characteristic	PCB Content	TCLP Metals	Total Metals																																	
☐ Ignitable [D001] ☐ Corrosive [D002] ☐ Reactive [D003] ☐ Toxic [D004 – D043] List Here:	☒ Not Detected [non TSCA or State Regulated] ☐ Not Sampled ☐ ≥ 2 ppm and < 50 ppm [Potentially TSCA Regulated or State Regulated PCB Waste-WPCB] ☐ ≥ 50 ppm [TSCA Regulated] ☐ < 1 ppm Note: IF WASTE STREAM IS BEING MANAGED AS TSCA WASTE, DO NOT USE WPCB STATE CODE PER WAC 173-303-071(3)(k)	☐ Arsenic ≥ 5.0 mg/L [D004] ☐ Barium ≥ 100.0 mg/L [D005] ☐ Cadmium ≥ 1.0 mg/L [D006] ☐ Chromium ≥ 5.0 mg/L [D007] ☐ Lead ≥ 5.0 mg/L [D008] ☐ Mercury ≥ 0.2 mg/L [D009] ☐ Selenium ≥ 1.0 mg/L [D010] ☐ Silver ≥ 5.0 mg/L [D011] Check if: ☐ Assumed ☐ TCLP Conducted ☒ TCLP Not Conducted Comments:	☐ mg/kg ☐ ug/kg ☐ mg/L ☒ ug/L <table><tbody><tr><td>Arsenic:</td><td></td><td>☒ ND</td></tr><tr><td>Barium:</td><td>170</td><td>☐ ND</td></tr><tr><td>Cadmium:</td><td></td><td>☒ ND</td></tr><tr><td>Chromium:</td><td>60</td><td>☐ ND</td></tr><tr><td>Copper:</td><td>240</td><td>☐ ND</td></tr><tr><td>Lead:</td><td>220</td><td>☐ ND</td></tr><tr><td>Mercury:</td><td></td><td>☒ ND</td></tr><tr><td>Nickel:</td><td>110</td><td>☐ ND</td></tr><tr><td>Selenium:</td><td></td><td>☒ ND</td></tr><tr><td>Silver:</td><td></td><td>☒ ND</td></tr><tr><td>Zinc:</td><td>730</td><td>☐ ND</td></tr></tbody></table> Comments:	Arsenic:		☒ ND	Barium:	170	☐ ND	Cadmium:		☒ ND	Chromium:	60	☐ ND	Copper:	240	☐ ND	Lead:	220	☐ ND	Mercury:		☒ ND	Nickel:	110	☐ ND	Selenium:		☒ ND	Silver:		☒ ND	Zinc:	730	☐ ND
Arsenic:		☒ ND																																		
Barium:	170	☐ ND																																		
Cadmium:		☒ ND																																		
Chromium:	60	☐ ND																																		
Copper:	240	☐ ND																																		
Lead:	220	☐ ND																																		
Mercury:		☒ ND																																		
Nickel:	110	☐ ND																																		
Selenium:		☒ ND																																		
Silver:		☒ ND																																		
Zinc:	730	☐ ND																																		

Physical Composition (list all constituents, including debris, any absorbents, liquid range, etc.).

Constituent	Volume (Range %)
water	90-100
Oils, sludge, debris	0 - 10



C. LISTED WASTE

- ☐ Discarded Listed Chemical Product (U or P List):
☐ Listed Source Waste (F or K List):
☒ Not Applicable:

D. WA STATE CRITERIA WASTE

☐ Not applicable per WAC 173-303-070(5): Further designation will not change the generator status or change the way the waste must be managed.

WA Toxic Criteria Equivalent Concentration (E.C):	WA Persistent Criteria Total HOC	WA Persistent Criteria Total PAH
☒ < 0.001 % [not a Toxic Criteria DW] ☐ 0.001 ≥ 1.0 % [WT02 – DW] ☐ ≥ 1.0% [WT01 – EHW]	☒ < 0.01 % [NOT APPLICABLE] ☐ 0.01 to 1.0% [WP02 – DW] ☐ > 1.0 % [WP01 – EHW]	☒ < 1.0% [NOT APPLICABLE] ☐ > 1.0% [WP03 – EHW]

DW: Dangerous Waste EHW: Extremely Hazardous Waste HOC: Halogenated Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons

E. ADDITIONAL INFORMATION (Describe any additional information about the waste (e.g. process knowledge statement, regulatory exemptions, assumptions made, etc.)

Analysis has identified trace constituents listed in 40 CFR 261.31, *Wastes from Non-Specific Sources*. However, the original processes generating any of the trace constituents in question are unknown and therefore RCRA F Series is not applicable. This designation is consistent with USEPA interpretation of unknown F-Listed trace constituents: "Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste." - Management of Remediation Waste Under RCRA, EPA530-F-98-026

Analysis has also identified constituents potentially exhibiting toxicity characteristics. However, in accordance with 40 CFR 261.4 (b)(10), these compounds are not considered hazardous waste, because the impacted media was removed as part of a UST Corrective Action.

A Washington State toxic criteria book designation was conducted in accordance with WAC 173-303-100. The calculated equivalent concentration value was less than 0.001%, **this waste stream is therefore designated as non-dangerous waste.**

Attachments:

- ☐ Field Report
☐ Sample Log
☒ Laboratory Data (OnSite Environmental Lab Report 2310-156)
☒ Dangerous Waste Toxic Equivalent Concentration Calculation
☐ Biological Testing Method 80-12 (Fish Bioassay)
☐ Other:



F. WASTE DESIGNATION SUMMARY

☐ RCRA Hazardous Waste

USDOT Proper Shipping Name:

RCRA Waste Codes:

☐ TSCA Regulated Waste

TSCA Description:

☒ Non-Hazardous Solid Waste/RCRA Exempt/RCRA Excluded

Description: Non-hazardous waste, liquid

Designation Performed by: Nathan Moxley, LHG

Title: Senior Geologist

Date: 10-16-2023

Designation Reviewed by: Dave Hill, PE, CHMM

Title: Principal Engineer

Date: 10-16-2023

Book Designation: Jorgensen UST Piping Utilidor, Water Designation

Waste Stream: Water

Sample IDs: "UST Piping Utilidor"

Sample Date: 10/12/23

Book Designation Performed by: N. Moxley

Conversions 1 ng/kg = 10⁻¹⁰ % (mass %)
1 ug/kg = 10⁻⁷ %
1 mg/kg = 10⁻⁴ %

Units Displayed as		μg/L	Conversion Factor	Concentration (mass %)					
Analyte	CAS	Concentration*	Toxicity ^{Source}	Toxic Category	X	A	B	C	D
TOTAL METALS by 6010C/7471B									
Arsenic	7440-38-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) >170 - <15,610 ug/L/96hr ³	B					
Barium	7440-39-3	170	LC50 Lepomis macrochirus (Bluegill) 198000 ug/L/96hr ³	NOT APPLICABLE					
Cadmium	7440-43-9	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 0.003 mg/L/96 hr ³	X					
Chromium	7440-47-3	60	LC50 Danio rerio (Zebra Danio) 3.9 mg/kg/24 hr ³	C				6.00E-06	
Copper	7440-50-8	240	LC50 Pimephales promelas (fathead minnow) 0.02 mg/l/96 hr ³	A		2.40E-05			
Lead	7439-92-1	220	LC50 Oncorhynchus mykiss (Rainbow Trout) 1000 ug/L/96 hr ³	C				2.20E-05	
Manganese	7439-96-5	--	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.89 mg/kg ³	C					
Mercury	7439-97-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 33 ug/L/96 hr ³	A					
Nickel	7440-02-0	110	LC50 Oncorhynchus mykiss (Rainbow Trout) 15 mg/L 96 hr ³	C					1.10E-05
Selenium	7782-49-2	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 11500 ug/L/96 hr ³	D					
Silver	7440-22-4	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.2 ug/L/ 96hr ³	X					
Zinc	7440-66-6	730	LC50 Oncorhynchus tshawytscha (Chinook Salmon) 0.182 mg/L/96 hr ³	B			7.30E-05		
VOLATILES by EPA 8260C									
Dichlorodifluoromethane	75-71-8	ND	LD 50 Rat Inhalation >800,000 mg/L ²	NOT APPLICABLE					
Chloromethane	74-87-3	ND	LD50 Oral Rat 1800 mg/kg ²	D					
Vinyl Chloride	75-01-4	ND	LD50 Oral Rat 500 mg/kg ²	C					
Bromomethane	74-83-9	ND	LD50 Oral Rat 214 mg/kg ²	C					
Chloroethane	79-34-5	ND	LD50 Oral Rat 200 mg/kg ³	C					
Trichlorofluoromethane	75-69-4	ND	LD50 Oral Rat 352 mg/kg ¹	C					
1,1-Dichloroethene	75-35-4	ND	LD50 Oral Rat 200 mg/kg ²	C					
Acetone	67-64-1	51	LC Rat Inhalation 50.10 mg/kg ¹	D					5.10E-06
Iodomethane	74-88-4	ND	LD50 Oral Rat 76 mg/kg ²	C					
Carbon Disulfide	75-15-0	ND	LD50 Oral Rat 1200 mg/kg ¹	D					
Methylene Chloride	75-09-2	ND	LD50 Oral Rat 985 mg/kg ¹	D					
trans-1,2-Dichloroethene	156-60-5	ND	LD50 Rat oral 1235 mg/kg ²	D					
Methyl t-Butyl Ether	1634-04-4	ND	LD50 Rat Oral 4000 mg/kg ²	D					
1,1-Dichloroethane	75-34-3	ND	LD50 Rat Oral 725 mg/kg ²	D					
Vinyl Acetate	108-05-4	ND	LC50 Rat Inhalation 11.4 mg/kg ¹	C					
2,2-Dichloropropane	594-20-7	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM 1,2-DICHLOROPROPANE LD50 Rat Oral 1947 mg/kg ²	D					
cis-1,2-Dichloroethene	156-59-2	ND	LC50 Lepomis machrochirus (bluegill) 135,000 ug/l/96 hr ²	NOT APPLICABLE					
2-Butanone	78-93-3	ND	LD50 Oral Rat 2737 mg/kg ¹	D					
Bromochloromethane	74-97-5	ND	LD50 Oral Rat 5000 mg/kg ²	D					
Chloroform	67-66-3	ND	LD50 Rabbit Dermal 20 mg/kg ³	B					
1,1,1-Trichloroethane	71-55-6	ND	LC50 Oncorhynchus mykiss (Rainbow Trout) 42.3 mg/L/96hr ³	D					
Carbon Tetrachloride	56-23-5	ND	LD50 Oral Rat 2350 mg/kg ³	D					

1,1-Dichloropropene	563-58-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM 1,3-DICHLOROPROPENE LD50 Rat oral 127mg/kg ²	C					
Benzene	71-43-2	10	LC50 Oncorhynchus mykiss (Rainbow Trout) 9.2 mg/L/96hr ³	C				1.00E-06	
1,2-Dichloroethane	107-06-2	ND	LD50 Rat oral 670-890 mg/kg ²	D					
Trichloroethene	79-01-6	ND	LC50 Pimephales promelas (fathead minnow) 40.7 mg/l/96 hr ²	D					
1,2-Dichloropropane	78-87-5	ND	LD50 Rat oral 1947 mg/kg ²	D					
Dibromomethane	74-95-3	ND	LD50 Rat oral 108 mg/kg ¹	C					
Bromodichloromethane	75-27-4	ND	LD50 Rat Male oral 916 mg/kg ²	D					
2-Chloroethyl Vinyl Ether	110-75-8	ND	LD50 Rat oral 250 mg/kg ²	C					
(cis) 1,3-Dichloropropene	10061-01-5	ND	LD50 Rat (CD) oral 127 mg/kg ²	C					
Methyl Isobutyl Ketone	108-10-1	ND	LD50 Rat oral 4600 mg/kg ²	D					
Toluene	108-88-3	100	LC50 Oncorhynchus mykiss (Rainbow Trout) 6.78 mg/L/96hr ³	C				1.00E-05	
(trans) 1,3-Dichloropropene	10061-02-6	ND	NO TOXICITY DATA AVAILABLE-DATA TAKEN FROM (cis) 1,3-Dichloropropene LD50 Rat oral 127mg/kg ²	C					
1,1,2-Trichloroethane	79-00-5	ND	LD50 Rat oral 837 mg/kg ²	D					
Tetrachloroethene	127-18-4	ND	LC50 Salmo gairdneri (Oncorhynchus mykiss - rainbow trout) 5 mg/l/96 hr ²	C					
1,3-Dichloropropane	142-28-9	ND	LC50 Poecilia reticulata (guppy) 84 ppm/7 days ²	D					
2-Hexanone	591-78-6	ND	LD50 Rat oral 2590 mg/kg ²	D					
Dibromochloromethane	124-48-1	ND	LD50 Rat oral 370 mg/kg ²	C					
1,2-Dibromoethane	106-93-4	ND	LD50 Rat oral 108 mg/kg ²	C					
Chlorobenzene	108-90-7	ND	LC50 Rat Inhalation 13.65 mg/kg ³	C					
1,1,1,2-Tetrachloroethane	630-20-6	ND	LD50 Rat oral 670 mg/kg ²	D					
Ethylbenzene	100-41-4	84	Oncorhynchus mykiss (Rainbow Trout) 4.2 mg/L/96 hr ³	C				8.40E-06	
m,p-Xylene	108-38-3, 106-42-3	370	LC50 Oncorhynchus mykiss (Rainbow Trout) 2.6 mg/L/96hr ³	C				3.70E-05	
o-Xylene	95-47-6	170	LC50 Oncorhynchus mykiss (Rainbow Trout) 7.6 mg/L/96hr ³	C				1.70E-05	
Styrene	100-42-5	ND	LC50 Rat Inhalation 0.18 mg/kg ³	A					
Bromoform	75-25-2	ND	LD50 Rat 414 mg/kg ²	C					
Isopropylbenzene	98-82-8	31	1400 mg/kg Oral Rat LD50 ²	D					3.10E-06
Bromobenzene	108-86-1	ND	LD50 Oral Rat 2699 mg/kg	D					
1,1,2,2-Tetrachloroethane	79-34-5	ND	LD50 Rat oral 250 mg/kg ²	C					
1,2,3-Trichloropropane	96-18-4	ND	LD50 Rat oral 450 mg/kg ²	C					
n-propyl benzene	103-65-1	66	6040 mg/kg Oral Rat LD50 ²	NOT APPLICABLE					
2-Chlorotoluene	95-49-8	ND	LD50 Oral Rat 1600 mg/kg ²	D					
4-Chlorotoluene	106-43-4	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM 2-CHLOROTOLUENE Oral LD50 Rat1600 mg/kg ²	D					
1,3,5-Trimethylbenzene	108-67-8	120	LD50 Oral Rat 5000 mg/kg ¹	D					1.20E-05
tert-Butylbenzene	98-06-6	ND	NO TOXICITY DATA AVAILABLE TAKEN FROM SEC-BUTYLBENZENE LD50 Rat oral 2240 mg/kg ²	D					
1,2,4-Trimethylbenzene	95-63-6	410	LC50 Pimephales promelas (fathead minnow) 7.720 mg/l/96 hr ³	C				4.10E-05	
sec-Butylbenzene	135-98-8	42	2240 mg/kg Oral Rat LD50 ²	D					4.20E-06
1,3-Dichlorobenzene	541-73-1	ND	LD50 Rat oral 580 mg/kg ²	D					
p-Isopropyltoluene	99-87-6	38	LD50 Rat oral 4750 mg/kg ²	D					3.80E-06
1,4-Dichlorobenzene	106-46-7	ND	LD50 Rat oral 500 mg/kg ²	C					
1,2-Dichlorobenzene	95-50-1	ND	LD50 Oral Rat 500 mg/kg ³	C					
n-Butylbenzene	104-51-8	ND	LD50 Mouse sc 1994.5 mg/kg ²	D					
1,2-Dibromo-3-chloropropane	96-12-8	ND	LD50 Rat oral 170 mg/kg ²	C					
1,2,4-Trichlorobenzene	120-82-1	ND	LD50 Rat oral 756 mg/kg ²	D					
Hexachlorobutadiene	87-68-3	ND	LD50 Rat oral 90 mg/kg ²	C					
Naphthalene	91-20-3	360	LD50 Oral Rat 490 mg/kg ³	C				3.60E-05	
1,2,3-Trichlorobenzene	87-61-6	ND	LD50 Rat oral 756 mg/kg ²	D					
PCBs by EPA 8082A									
Aroclor 1016	12674-11-2	ND	LC50 Oncorhynchus mykiss (rainbow trout) 135 ug/L 120 hr ²	B					

Aroclor 1221	11104-28-2	ND	LC50 Salmo clarki (Cutthroat salmon) 1.17 mg/L for 96 hr ²	C					
Aroclor 1232	11141-16-5	ND	LC50 Salmo clarki (Cutthroat salmon) 2.5 mg/L for 96 hr ²	C					
Aroclor 1242	53469-21-9	ND	LC50 Oncorhynchus mykiss (rainbow trout) 67 ug/L 120 hr ²	A					
Aroclor 1248	12672-29-6	ND	LC50 Oncorhynchus mykiss (rainbow trout) 54 ug/L 120 hr ²	A					
Aroclor 1254	11097-69-1	ND	LC50 Oncorhynchus mykiss (rainbow trout) 156 ug/L 120 hr ²	B					
Aroclor 1260	11096-82-5	ND	LC50 Oncorhynchus mykiss (rainbow trout) >232 ug/L for 96 hr ²	B					
Total (SUM)					0.0000000	0.0000240	0.0000730	0.0001784	0.0000

						EC	Designation
$\sum X\% / 1$							
0.00E+00							
0.00E+00						0.0000033	Non-Dangerous Waste

Enter Category Mass % Here →

- Sources
- 1 RTECS: Registry of Toxic Effects of Chemical Substances
 - 2 HSDB: Hazardous Substances Data Bank, National Library of Medicine
 - 3 ECOTOX Database: United States Environmental Protection Agency



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 13, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2310-156

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on October 12, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-156
Project: Star Forge

Case Narrative

Samples were collected on October 12, 2023 and received by the laboratory on October 12, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PCBs EPA 8082A Analysis

Sample matrix effects caused the percent recovery for the surrogate DCB in the sample UST Piping Utilidor (30%) to be below the quality control limits of 55-138%. All other QC associated with this sample batch was within limits. No further action was undertaken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Dichlorodifluoromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chloromethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Vinyl Chloride	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromomethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Chloroethane	ND	10	EPA 8260D	10-13-23	10-13-23	
Trichlorofluoromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Acetone	51	50	EPA 8260D	10-13-23	10-13-23	
Iodomethane	ND	50	EPA 8260D	10-13-23	10-13-23	
Carbon Disulfide	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methylene Chloride	ND	10	EPA 8260D	10-13-23	10-13-23	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methyl t-Butyl Ether	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Vinyl Acetate	ND	10	EPA 8260D	10-13-23	10-13-23	
2,2-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
2-Butanone	ND	50	EPA 8260D	10-13-23	10-13-23	
Bromochloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chloroform	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,1-Trichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Carbon Tetrachloride	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Benzene	10	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Trichloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Dibromomethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromodichloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Methyl Isobutyl Ketone	ND	20	EPA 8260D	10-13-23	10-13-23	
Toluene	100	10	EPA 8260D	10-13-23	10-13-23	
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260D	10-13-23	10-13-23	



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Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
1,1,2-Trichloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Tetrachloroethene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,3-Dichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
2-Hexanone	ND	20	EPA 8260D	10-13-23	10-13-23	
Dibromochloromethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromoethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Chlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Ethylbenzene	84	2.0	EPA 8260D	10-13-23	10-13-23	
m,p-Xylene	370	4.0	EPA 8260D	10-13-23	10-13-23	
o-Xylene	170	2.0	EPA 8260D	10-13-23	10-13-23	
Styrene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Bromoform	ND	10	EPA 8260D	10-13-23	10-13-23	
Isopropylbenzene	31	2.0	EPA 8260D	10-13-23	10-13-23	
Bromobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichloropropane	ND	2.0	EPA 8260D	10-13-23	10-13-23	
n-Propylbenzene	66	2.0	EPA 8260D	10-13-23	10-13-23	
2-Chlorotoluene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
4-Chlorotoluene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,3,5-Trimethylbenzene	120	2.0	EPA 8260D	10-13-23	10-13-23	
tert-Butylbenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trimethylbenzene	410	2.0	EPA 8260D	10-13-23	10-13-23	
sec-Butylbenzene	42	2.0	EPA 8260D	10-13-23	10-13-23	
1,3-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
p-Isopropyltoluene	38	2.0	EPA 8260D	10-13-23	10-13-23	Y
1,4-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
n-Butylbenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromo-3-chloropropane	ND	10	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Hexachlorobutadiene	ND	10	EPA 8260D	10-13-23	10-13-23	
Naphthalene	360	10	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichlorobenzene	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Surrogate:		Percent Recovery	Control Limits			
Dibromofluoromethane	101		75-127			
Toluene-d8	110		80-127			
4-Bromofluorobenzene	101		78-125			



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Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chloromethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromomethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Chloroethane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Acetone	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Iodomethane	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Carbon Disulfide	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-13-23	10-13-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Vinyl Acetate	ND	1.0	EPA 8260D	10-13-23	10-13-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Butanone	ND	5.0	EPA 8260D	10-13-23	10-13-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chloroform	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Benzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Trichloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Dibromomethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Toluene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-13-23	10-13-23	



Date of Report: October 13, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Hexanone	ND	2.0	EPA 8260D	10-13-23	10-13-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-13-23	10-13-23	
o-Xylene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Styrene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromoform	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Isopropylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Bromobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-13-23	10-13-23	
n-Propylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
n-Butylbenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-13-23	10-13-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
Naphthalene	ND	1.0	EPA 8260D	10-13-23	10-13-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-13-23	10-13-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	75-127				
Toluene-d8	107	80-127				
4-Bromofluorobenzene	101	78-125				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	13.3	11.1	10.0	10.0	133	111	34-166	18	21	
Chloromethane	8.14	7.18	10.0	10.0	81	72	63-138	13	18	
Vinyl Chloride	9.66	8.35	10.0	10.0	97	84	71-135	15	20	
Bromomethane	12.2	11.3	10.0	10.0	122	113	20-151	8	36	
Chloroethane	9.47	8.15	10.0	10.0	95	82	76-125	15	20	
Trichlorofluoromethane	10.1	8.81	10.0	10.0	101	88	75-131	14	19	
1,1-Dichloroethene	9.63	8.58	10.0	10.0	96	86	78-125	12	19	
Acetone	8.25	8.56	10.0	10.0	83	86	76-125	4	18	
Iodomethane	10.8	10.5	10.0	10.0	108	105	10-155	3	40	
Carbon Disulfide	8.42	7.65	10.0	10.0	84	77	58-129	10	17	
Methylene Chloride	8.68	7.84	10.0	10.0	87	78	80-120	10	15	I
(trans) 1,2-Dichloroethene	8.93	8.14	10.0	10.0	89	81	80-125	9	17	
Methyl t-Butyl Ether	8.45	7.56	10.0	10.0	85	76	80-122	11	15	I
1,1-Dichloroethane	9.08	8.10	10.0	10.0	91	81	80-125	11	17	
Vinyl Acetate	9.72	8.82	10.0	10.0	97	88	80-131	10	15	
2,2-Dichloropropane	10.6	9.84	10.0	10.0	106	98	80-146	7	21	
(cis) 1,2-Dichloroethene	9.31	8.32	10.0	10.0	93	83	80-129	11	17	
2-Butanone	9.02	8.66	10.0	10.0	90	87	80-129	4	16	
Bromochloromethane	9.06	7.82	10.0	10.0	91	78	80-125	15	18	I
Chloroform	9.15	8.24	10.0	10.0	92	82	80-123	10	16	
1,1,1-Trichloroethane	9.34	8.45	10.0	10.0	93	85	80-123	10	18	
Carbon Tetrachloride	9.78	8.67	10.0	10.0	98	87	80-126	12	17	
1,1-Dichloropropene	9.38	8.39	10.0	10.0	94	84	80-126	11	18	
Benzene	8.92	8.08	10.0	10.0	89	81	80-121	10	16	
1,2-Dichloroethane	9.77	8.95	10.0	10.0	98	90	80-124	9	15	
Trichloroethene	10.1	8.99	10.0	10.0	101	90	80-122	12	18	
1,2-Dichloropropane	9.76	8.20	10.0	10.0	98	82	80-123	17	15	L
Dibromomethane	9.55	8.14	10.0	10.0	96	81	80-123	16	15	L
Bromodichloromethane	9.65	8.46	10.0	10.0	97	85	80-125	13	15	
(cis) 1,3-Dichloropropene	9.66	8.76	10.0	10.0	97	88	80-129	10	15	
Methyl Isobutyl Ketone	9.60	8.48	10.0	10.0	96	85	80-124	12	15	
Toluene	9.41	8.34	10.0	10.0	94	83	80-120	12	18	
(trans) 1,3-Dichloropropene	11.1	10.1	10.0	10.0	111	101	80-134	9	17	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 2 of 2

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.55	8.76	10.0	10.0	96	88	77-126	9	20	L
Tetrachloroethene	12.0	10.8	10.0	10.0	120	108	80-124	11	18	
1,3-Dichloropropane	10.0	8.86	10.0	10.0	100	89	80-120	12	15	
2-Hexanone	9.89	9.59	10.0	10.0	99	96	80-130	3	16	
Dibromochloromethane	10.2	9.22	10.0	10.0	102	92	80-128	10	15	
1,2-Dibromoethane	9.54	9.01	10.0	10.0	95	90	80-127	6	15	
Chlorobenzene	11.0	9.90	10.0	10.0	110	99	80-120	11	17	
1,1,1,2-Tetrachloroethane	10.8	9.82	10.0	10.0	108	98	80-125	10	17	
Ethylbenzene	11.1	10.2	10.0	10.0	111	102	80-125	8	18	
m,p-Xylene	22.5	20.9	20.0	20.0	113	105	80-127	7	18	
o-Xylene	10.9	10.1	10.0	10.0	109	101	80-126	8	18	
Styrene	10.9	10.1	10.0	10.0	109	101	80-130	8	17	
Bromoform	10.7	9.73	10.0	10.0	107	97	80-130	9	15	
Isopropylbenzene	11.3	10.5	10.0	10.0	113	105	80-129	7	18	
Bromobenzene	10.4	8.98	10.0	10.0	104	90	76-128	15	16	
1,1,2,2-Tetrachloroethane	9.44	7.78	10.0	10.0	94	78	74-130	19	15	
1,2,3-Trichloropropane	8.95	7.63	10.0	10.0	90	76	71-129	16	25	
n-Propylbenzene	11.9	10.4	10.0	10.0	119	104	80-129	13	19	
2-Chlorotoluene	11.3	9.82	10.0	10.0	113	98	80-128	14	18	
4-Chlorotoluene	11.3	9.92	10.0	10.0	113	99	80-130	13	19	
1,3,5-Trimethylbenzene	11.6	9.95	10.0	10.0	116	100	80-131	15	18	
tert-Butylbenzene	11.6	10.1	10.0	10.0	116	101	80-130	14	18	
1,2,4-Trimethylbenzene	11.7	10.3	10.0	10.0	117	103	80-130	13	18	
sec-Butylbenzene	11.8	10.8	10.0	10.0	118	108	80-130	9	18	
1,3-Dichlorobenzene	11.5	10.1	10.0	10.0	115	101	80-126	13	17	
p-Isopropyltoluene	12.2	11.0	10.0	10.0	122	110	80-132	10	18	
1,4-Dichlorobenzene	11.0	9.85	10.0	10.0	110	99	80-121	11	17	
1,2-Dichlorobenzene	10.8	9.97	10.0	10.0	108	100	79-125	8	15	
n-Butylbenzene	12.4	11.8	10.0	10.0	124	118	80-138	5	19	
1,2-Dibromo-3-chloropropane	9.27	8.38	10.0	10.0	93	84	73-133	10	15	
1,2,4-Trichlorobenzene	11.5	11.8	10.0	10.0	115	118	80-139	3	18	
Hexachlorobutadiene	11.2	12.3	10.0	10.0	112	123	80-151	9	18	
Naphthalene	10.7	11.1	10.0	10.0	107	111	68-144	4	25	
1,2,3-Trichlorobenzene	10.6	11.8	10.0	10.0	106	118	75-146	11	28	
Surrogate:										
Dibromofluoromethane					101	99	75-127			
Toluene-d8					112	108	80-127			
4-Bromofluorobenzene					100	101	78-125			



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

PCBs EPA 8082A

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Aroclor 1016	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1221	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1232	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1242	ND	0.35	EPA 8082A	10-13-23	10-13-23	U1
Aroclor 1248	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1254	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1260	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1262	ND	0.058	EPA 8082A	10-13-23	10-13-23	
Aroclor 1268	ND	0.058	EPA 8082A	10-13-23	10-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	30	55-138				Q



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Aroclor 1016	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-13-23	10-13-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	80	55-138				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.459	0.463	0.500	0.500	N/A	92	93	66-120	1	16
Surrogate:										
DCB						92	87	55-138		



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7470A**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST Piping Utilidor						
Laboratory ID: 10-156-01						
Arsenic	ND	200	EPA 6010D	10-12-23	10-12-23	
Barium	170	50	EPA 6010D	10-12-23	10-12-23	
Cadmium	ND	10	EPA 6010D	10-12-23	10-12-23	
Chromium	60	10	EPA 6010D	10-12-23	10-12-23	
Copper	240	20	EPA 6010D	10-12-23	10-12-23	
Lead	220	100	EPA 6010D	10-12-23	10-12-23	
Mercury	ND	0.50	EPA 7470A	10-12-23	10-12-23	
Nickel	110	50	EPA 6010D	10-12-23	10-12-23	
Selenium	ND	200	EPA 6010D	10-12-23	10-12-23	
Silver	ND	20	EPA 6010D	10-12-23	10-12-23	
Zinc	730	50	EPA 6010D	10-12-23	10-12-23	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012WH2					
Arsenic	ND	200	EPA 6010D	10-12-23	10-12-23	
Barium	ND	50	EPA 6010D	10-12-23	10-12-23	
Cadmium	ND	10	EPA 6010D	10-12-23	10-12-23	
Chromium	ND	10	EPA 6010D	10-12-23	10-12-23	
Copper	ND	20	EPA 6010D	10-12-23	10-12-23	
Lead	ND	100	EPA 6010D	10-12-23	10-12-23	
Nickel	ND	50	EPA 6010D	10-12-23	10-12-23	
Selenium	ND	200	EPA 6010D	10-12-23	10-12-23	
Silver	ND	20	EPA 6010D	10-12-23	10-12-23	
Zinc	ND	50	EPA 6010D	10-12-23	10-12-23	
Laboratory ID:	MB1012W2					
Mercury	ND	0.50	EPA 7470A	10-12-23	10-12-23	



Date of Report: October 13, 2023
 Samples Submitted: October 12, 2023
 Laboratory Reference: 2310-156
 Project: Star Forge

**TOTAL METALS
 EPA 6010D/7470A
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-116-10							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	ND	ND	NA	NA	NA	NA	NA	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	ND	ND	NA	NA	NA	NA	NA	20
Copper	ND	ND	NA	NA	NA	NA	NA	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	10-117-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-116-10									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	1970	2120	2000	2000	ND	99	106	75-125	7	20
Barium	2200	2260	2000	2000	ND	110	113	75-125	3	20
Cadmium	997	1020	1000	1000	ND	100	102	75-125	2	20
Chromium	2080	2120	2000	2000	ND	104	106	75-125	2	20
Copper	1060	1070	1000	1000	ND	106	107	75-125	2	20
Lead	5420	5510	5000	5000	ND	108	110	75-125	2	20
Nickel	2180	2230	2000	2000	ND	109	111	75-125	2	20
Selenium	2020	2030	2000	2000	ND	101	102	75-125	0	20
Silver	530	542	500	500	ND	106	108	75-125	2	20
Zinc	2120	2170	2000	2000	ND	106	108	75-125	2	20

Laboratory ID:	10-117-01									
Mercury	6.48	6.33	6.25	6.25	ND	104	101	75-125	2	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Page 1 of 1

Turnaround Request
(in working days)

Laboratory Number: **70-156**

Company: <u>DH Environmental</u>						(Check One)									
Project Number:						☐ Same Day ☒ 1st Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)									
Project Name: <u>Star Force</u>															
Project Manager: <u>N. Mokey AD-Hill</u>															
Sampled by: <u>D. Hill</u>						☒ Best Available (other)									
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers										
1	UST Biping Utkidoo	10/12/23	1115	Water	6	NWTPH-HCID									
						NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)									
						NWTPH-Gx									
						NWTPH-Dx (SG Clean-up ☐)									
						☒ Volatiles 8260									
						Halogenated Volatiles 8260									
						EDB EPA 8011 (Waters Only)									
						Semivolatiles 8270/SIM (with low-level PAHs) PAHs 8270/SIM (low-level)									
						☒ PCBs 8082									
Organochlorine Pesticides 8081															
Organophosphorus Pesticides 8270/SIM															
Chlorinated Acid Herbicides 8151															
☒ Total RCRA Metals + Cu, Ni, Zn															
Total MTCA Metals															
TCLP Metals															
HEM (oil and grease) 1664															
% Moisture															
Comments/Special Instructions															
Relinquished Signature: <u>[Signature]</u> Company: <u>DH Environmental</u> Date: <u>10/14/23</u> Time: <u>1250</u>															
Received Signature: <u>[Signature]</u> Company: <u>DSC</u> Date: <u>10/12/23</u> Time: <u>1250</u>															
Relinquished															
Received															
Relinquished															
Received															
Reviewed/Date															
Data Package: Standard ☒ Level III ☐ Level IV ☐															
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐															



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 31, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-250

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-250
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 21 and 22, 2023 and received by the laboratory on August 22, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D (Water) Analysis

The percent recovery for 1,1,2,2-Tetrachloroethane is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Volatiles EPA 8260D (Soil) Analysis

The percent recovery for Dibromomethane is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

The RPD for Dibromomethane is outside the control limits for the Spike Blank/Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID:	08-250-01					
Gasoline	ND	6.4	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				
Client ID: NT-piping-SS-25-2.0-082123						
Laboratory ID:	08-250-02					
Gasoline	ND	5.2	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-piping-SS-26-2.0-082123						
Laboratory ID:	08-250-03					
Gasoline	ND	4.8	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-29-6.5-082223						
Laboratory ID:	08-250-04					
Gasoline	ND	4.9	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-30-6.5-082223						
Laboratory ID:	08-250-05					
Gasoline	ND	5.8	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: NT-SS-31-6.5-082223						
Laboratory ID:	08-250-06					
Gasoline Range Organics	80	4.9	NWTPH-Gx	8-24-23	8-24-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-32-6.5-082223						
Laboratory ID:	08-250-07					
Gasoline	ND	5.3	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-126				



Date of Report: August 31, 2023
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 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-33-6.5-082223						
Laboratory ID:	08-250-08					
Gasoline	ND	5.7	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				
Client ID: NT-SS-34-6.5-082223						
Laboratory ID:	08-250-09					
Gasoline Range Organics	280	5.3	NWTPH-Gx	8-24-23	8-25-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: NT-SS-35-6.5-082223						
Laboratory ID:	08-250-10					
Gasoline Range Organics	6.5	5.4	NWTPH-Gx	8-24-23	8-24-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-SS-Dup-1-082223						
Laboratory ID:	08-250-11					
Gasoline	ND	5.1	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: ST-SS-8-8.5-082223						
Laboratory ID:	08-250-12					
Gasoline Range Organics	1300	62	NWTPH-Gx	8-24-23	8-25-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	65-126				
Client ID: ST-SS-7-8.5-082223						
Laboratory ID:	08-250-13					
Gasoline	ND	5.7	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: ST-SS-6-8.5-082223						
Laboratory ID:	08-250-14					
Gasoline	ND	5.6	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				



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GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-1-8.5-082223					
Laboratory ID:	08-250-15					
Gasoline	ND	6.7	NWTPH-Gx	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	91	65-126				
Client ID:	ST-SS-2-8.5-082223					
Laboratory ID:	08-250-16					
Gasoline	ND	7.3	NWTPH-Gx	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	91	65-126				
Client ID:	ST-SS-Dup-2-082223					
Laboratory ID:	08-250-17					
Gasoline	ND	6.4	NWTPH-Gx	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	65-126				



Date of Report: August 31, 2023
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Gasoline	ND	5.0	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Laboratory ID:	MB0824S2					
Gasoline	ND	5.0	NWTPH-Gx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-250-01										
	ORIG		DUP								
Gasoline	ND	ND	NA	NA	NA		NA	NA	NA	30	
Surrogate:											
Fluorobenzene						81	90	65-126			
Laboratory ID:	08-250-02										
	ORIG		DUP								
Gasoline	ND	ND	NA	NA	NA		NA	NA	NA	30	
Surrogate:											
Fluorobenzene						91	92	65-126			



Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
Gasoline	ND	100	NWTPH-Gx	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>70</i>	<i>65-122</i>				



Date of Report: August 31, 2023
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 Laboratory Reference: 2308-250
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
Gasoline	ND	100	NWTPH-Gx	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-231-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				83	79	65-122		



Date of Report: August 31, 2023
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 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID:	08-250-01					
Diesel Range Organics	ND	1500	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	8900	3100	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S

Client ID: NT-piping-SS-25-2.0-082123						
Laboratory ID:	08-250-02					
Diesel Range Organics	39	30	NWTPH-Dx	8-28-23	8-31-23	N
Lube Oil	360	60	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				

Client ID: NT-piping-SS-26-2.0-082123						
Laboratory ID:	08-250-03					
Diesel Range Organics	ND	30	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	120	59	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	56	50-150				

Client ID: NT-SS-29-6.5-082223						
Laboratory ID:	08-250-04					
Diesel Range Organics	ND	29	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	57	NWTPH-Dx	8-28-23	8-30-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	96	50-150				

Client ID: NT-SS-30-6.5-082223						
Laboratory ID:	08-250-05					
Diesel Range Organics	ND	29	NWTPH-Dx	8-28-23	8-29-23	
Lube Oil Range Organics	ND	58	NWTPH-Dx	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				

Client ID: NT-SS-31-6.5-082223						
Laboratory ID:	08-250-06					
Diesel Range Organics	ND	1800	NWTPH-Dx	8-28-23	8-31-23	U1
Lube Oil	32000	2900	NWTPH-Dx	8-28-23	8-31-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S



Date of Report: August 31, 2023
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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-32-6.5-082223					
Laboratory ID:	08-250-07					
Diesel Range Organics	ND	30	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID:	NT-SS-33-6.5-082223					
Laboratory ID:	08-250-08					
Diesel Range Organics	ND	31	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID:	NT-SS-34-6.5-082223					
Laboratory ID:	08-250-09					
Diesel Fuel #2	8600	150	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	2200	300	NWTPH-Dx	8-28-23	8-31-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Client ID:	NT-SS-35-6.5-082223					
Laboratory ID:	08-250-10					
Diesel Range Organics	ND	240	NWTPH-Dx	8-28-23	8-31-23	U1
Lube Oil	6600	290	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	106	50-150				

Client ID:	NT-SS-Dup-1-082223					
Laboratory ID:	08-250-11					
Diesel Range Organics	ND	730	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	14000	1500	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				

S

Client ID:	ST-SS-8-8.5-082223					
Laboratory ID:	08-250-12					
Diesel Fuel #2	5300	32	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	150	NWTPH-Dx	8-28-23	8-30-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	61	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-7-8.5-082223					
Laboratory ID:	08-250-13					
Diesel Fuel #2	3400	31	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	160	NWTPH-Dx	8-28-23	8-30-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	138	50-150				

Client ID:	ST-SS-6-8.5-082223					
Laboratory ID:	08-250-14					
Diesel Fuel #2	57	31	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil Range Organics	ND	62	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	ST-SS-1-8.5-082223					
Laboratory ID:	08-250-15					
Diesel Range Organics	ND	33	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	67	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Client ID:	ST-SS-2-8.5-082223					
Laboratory ID:	08-250-16					
Diesel Fuel #2	64	33	NWTPH-Dx	8-28-23	8-31-23	
Lube Oil	85	66	NWTPH-Dx	8-28-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	ST-SS-Dup-2-082223					
Laboratory ID:	08-250-17					
Diesel Fuel #2	58	33	NWTPH-Dx	8-28-23	8-30-23	
Lube Oil Range Organics	ND	67	NWTPH-Dx	8-28-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S3					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-23	8-29-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	107	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	08-250-01									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil	7240	7200	NA	NA		NA	NA	1	40	
Surrogate:										
o-Terphenyl						---	---	50-150		S,S
Laboratory ID:	08-287-03									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil	127	115	NA	NA		NA	NA	10	40	
Surrogate:										
o-Terphenyl						99	103	50-150		



Date of Report: August 31, 2023
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VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0060	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0061	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.0097	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0044	EPA 8260D	8-24-23	8-24-23	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	0.0021	0.00088	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	0.025	0.0018	EPA 8260D	8-24-23	8-24-23	
o-Xylene	0.032	0.00088	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0044	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.053	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.27	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.053	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0065	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0066	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.011	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0048	EPA 8260D	8-24-23	8-24-23	



Date of Report: August 31, 2023
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	0.0012	0.00096	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	0.013	0.0019	EPA 8260D	8-24-23	8-24-23	
o-Xylene	0.015	0.00096	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,1,2,2-Tetrachloroethane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
2-Chlorotoluene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
4-Chlorotoluene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.0048	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260D	8-24-23	8-24-23	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	92	75-130				
Toluene-d8	100	78-128				
4-Bromofluorobenzene	103	71-130				



Date of Report: August 31, 2023
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 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0076	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



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 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Dichlorodifluoromethane	ND	0.0017	EPA 8260D	8-24-23	8-24-23	
Chloromethane	ND	0.0068	EPA 8260D	8-24-23	8-24-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromomethane	ND	0.0069	EPA 8260D	8-24-23	8-24-23	
Chloroethane	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Iodomethane	ND	0.011	EPA 8260D	8-24-23	8-24-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromochloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Chloroform	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Benzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Trichloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Dibromomethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Toluene	ND	0.0050	EPA 8260D	8-24-23	8-24-23	



Date of Report: August 31, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Chlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Ethylbenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-24-23	8-24-23	
o-Xylene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Bromoform	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
Bromobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	8-24-23	8-24-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>93</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-130</i>				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0370	0.0500	0.0500	75	74	30-160	1	26	
Chloromethane	0.0410	0.0429	0.0500	0.0500	82	86	59-131	5	26	
Vinyl Chloride	0.0440	0.0473	0.0500	0.0500	88	95	68-136	7	23	
Bromomethane	0.0420	0.0476	0.0500	0.0500	84	95	48-155	13	32	
Chloroethane	0.0458	0.0506	0.0500	0.0500	92	101	67-141	10	16	
Trichlorofluoromethane	0.0513	0.0575	0.0500	0.0500	103	115	76-127	11	19	
1,1-Dichloroethene	0.0489	0.0544	0.0500	0.0500	98	109	75-129	11	19	
Iodomethane	0.0328	0.0389	0.0500	0.0500	66	78	37-140	17	27	
Methylene Chloride	0.0467	0.0525	0.0500	0.0500	93	105	60-124	12	18	
(trans) 1,2-Dichloroethene	0.0489	0.0538	0.0500	0.0500	98	108	79-133	10	15	
Methyl t-Butyl Ether	0.0498	0.0526	0.0500	0.0500	100	105	73-125	5	17	
1,1-Dichloroethane	0.0491	0.0541	0.0500	0.0500	98	108	79-125	10	17	
2,2-Dichloropropane	0.0532	0.0532	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0523	0.0574	0.0500	0.0500	105	115	75-131	9	15	
Bromochloromethane	0.0496	0.0552	0.0500	0.0500	99	110	80-126	11	15	
Chloroform	0.0488	0.0525	0.0500	0.0500	98	105	80-123	7	15	
1,1,1-Trichloroethane	0.0466	0.0523	0.0500	0.0500	93	105	78-124	12	21	
Carbon Tetrachloride	0.0419	0.0473	0.0500	0.0500	84	95	74-127	12	18	
1,1-Dichloropropene	0.0445	0.0516	0.0500	0.0500	89	103	80-123	15	15	
Benzene	0.0476	0.0520	0.0500	0.0500	95	104	80-122	9	18	
1,2-Dichloroethane	0.0494	0.0542	0.0500	0.0500	99	108	75-124	9	15	
Trichloroethene	0.0514	0.0521	0.0500	0.0500	103	104	80-129	1	18	
1,2-Dichloropropane	0.0539	0.0540	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0499	0.0483	0.0500	0.0500	100	97	80-123	3	15	
Bromodichloromethane	0.0532	0.0533	0.0500	0.0500	106	107	80-129	0	15	
(cis) 1,3-Dichloropropene	0.0540	0.0541	0.0500	0.0500	108	108	80-130	0	15	
Toluene	0.0505	0.0497	0.0500	0.0500	101	99	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0546	0.0554	0.0500	0.0500	109	111	80-124	1	15	



Date of Report: August 31, 2023
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**VOLATILE ORGANICS EPA 8260D
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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0480	0.0480	0.0500	0.0500	96	96	80-120	0	15	
Tetrachloroethene	0.0540	0.0547	0.0500	0.0500	108	109	77-126	1	15	
1,3-Dichloropropane	0.0529	0.0528	0.0500	0.0500	106	106	77-123	0	15	
Dibromochloromethane	0.0548	0.0528	0.0500	0.0500	110	106	80-128	4	16	
1,2-Dibromoethane	0.0528	0.0514	0.0500	0.0500	106	103	80-122	3	20	
Chlorobenzene	0.0495	0.0509	0.0500	0.0500	99	102	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0504	0.0498	0.0500	0.0500	101	100	80-120	1	15	
Ethylbenzene	0.0510	0.0522	0.0500	0.0500	102	104	80-120	2	15	
m,p-Xylene	0.0990	0.102	0.100	0.100	99	102	80-120	3	15	
o-Xylene	0.0511	0.0525	0.0500	0.0500	102	105	80-120	3	15	
Bromoform	0.0538	0.0538	0.0500	0.0500	108	108	78-126	0	15	
Bromobenzene	0.0494	0.0476	0.0500	0.0500	99	95	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0521	0.0493	0.0500	0.0500	104	99	75-122	6	17	
1,2,3-Trichloropropane	0.0502	0.0473	0.0500	0.0500	100	95	72-125	6	20	
2-Chlorotoluene	0.0523	0.0508	0.0500	0.0500	105	102	75-128	3	15	
4-Chlorotoluene	0.0515	0.0507	0.0500	0.0500	103	101	78-127	2	16	
1,3-Dichlorobenzene	0.0519	0.0514	0.0500	0.0500	104	103	78-123	1	17	
1,4-Dichlorobenzene	0.0520	0.0510	0.0500	0.0500	104	102	77-121	2	17	
1,2-Dichlorobenzene	0.0518	0.0511	0.0500	0.0500	104	102	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0597	0.0523	0.0500	0.0500	119	105	61-137	13	28	
1,2,4-Trichlorobenzene	0.0582	0.0604	0.0500	0.0500	116	121	77-127	4	17	
Hexachlorobutadiene	0.0514	0.0512	0.0500	0.0500	103	102	77-125	0	22	
1,2,3-Trichlorobenzene	0.0527	0.0548	0.0500	0.0500	105	110	77-124	4	19	
Surrogate:										
Dibromofluoromethane					92	102	75-130			
Toluene-d8					100	99	78-128			
4-Bromofluorobenzene					107	107	71-130			



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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0301	0.0288	0.0500	0.0500	60	58	30-160	4	26	
Chloromethane	0.0367	0.0373	0.0500	0.0500	73	75	59-131	2	26	
Vinyl Chloride	0.0401	0.0404	0.0500	0.0500	80	81	68-136	1	23	
Bromomethane	0.0360	0.0379	0.0500	0.0500	72	76	48-155	5	32	
Chloroethane	0.0444	0.0440	0.0500	0.0500	89	88	67-141	1	16	
Trichlorofluoromethane	0.0478	0.0486	0.0500	0.0500	96	97	76-127	2	19	
1,1-Dichloroethene	0.0479	0.0481	0.0500	0.0500	96	96	75-129	0	19	
Iodomethane	0.0229	0.0281	0.0500	0.0500	46	56	37-140	20	27	
Methylene Chloride	0.0515	0.0528	0.0500	0.0500	103	106	60-124	2	18	
(trans) 1,2-Dichloroethene	0.0476	0.0476	0.0500	0.0500	95	95	79-133	0	15	
Methyl t-Butyl Ether	0.0500	0.0493	0.0500	0.0500	100	99	73-125	1	17	
1,1-Dichloroethane	0.0482	0.0490	0.0500	0.0500	96	98	79-125	2	17	
2,2-Dichloropropane	0.0510	0.0533	0.0500	0.0500	102	107	79-126	4	18	
(cis) 1,2-Dichloroethene	0.0514	0.0466	0.0500	0.0500	103	93	75-131	10	15	
Bromochloromethane	0.0522	0.0501	0.0500	0.0500	104	100	80-126	4	15	
Chloroform	0.0472	0.0479	0.0500	0.0500	94	96	80-123	1	15	
1,1,1-Trichloroethane	0.0451	0.0449	0.0500	0.0500	90	90	78-124	0	21	
Carbon Tetrachloride	0.0404	0.0446	0.0500	0.0500	81	89	74-127	10	18	
1,1-Dichloropropene	0.0414	0.0440	0.0500	0.0500	83	88	80-123	6	15	
Benzene	0.0473	0.0468	0.0500	0.0500	95	94	80-122	1	18	
1,2-Dichloroethane	0.0507	0.0505	0.0500	0.0500	101	101	75-124	0	15	
Trichloroethene	0.0506	0.0511	0.0500	0.0500	101	102	80-129	1	18	
1,2-Dichloropropane	0.0526	0.0465	0.0500	0.0500	105	93	80-123	12	15	
Dibromomethane	0.0515	0.0379	0.0500	0.0500	103	76	80-123	30	15	I,L
Bromodichloromethane	0.0529	0.0524	0.0500	0.0500	106	105	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0554	0.0534	0.0500	0.0500	111	107	80-130	4	15	
Toluene	0.0495	0.0496	0.0500	0.0500	99	99	80-120	0	18	
(trans) 1,3-Dichloropropene	0.0567	0.0556	0.0500	0.0500	113	111	80-124	2	15	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0490	0.0489	0.0500	0.0500	98	98	80-120	0	15	
Tetrachloroethene	0.0509	0.0531	0.0500	0.0500	102	106	77-126	4	15	
1,3-Dichloropropane	0.0525	0.0518	0.0500	0.0500	105	104	77-123	1	15	
Dibromochloromethane	0.0522	0.0544	0.0500	0.0500	104	109	80-128	4	16	
1,2-Dibromoethane	0.0515	0.0503	0.0500	0.0500	103	101	80-122	2	20	
Chlorobenzene	0.0489	0.0502	0.0500	0.0500	98	100	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0501	0.0502	0.0500	0.0500	100	100	80-120	0	15	
Ethylbenzene	0.0496	0.0504	0.0500	0.0500	99	101	80-120	2	15	
m,p-Xylene	0.0973	0.0993	0.100	0.100	97	99	80-120	2	15	
o-Xylene	0.0504	0.0508	0.0500	0.0500	101	102	80-120	1	15	
Bromoform	0.0556	0.0546	0.0500	0.0500	111	109	78-126	2	15	
Bromobenzene	0.0488	0.0486	0.0500	0.0500	98	97	79-124	0	15	
1,1,2,2-Tetrachloroethane	0.0533	0.0516	0.0500	0.0500	107	103	75-122	3	17	
1,2,3-Trichloropropane	0.0517	0.0502	0.0500	0.0500	103	100	72-125	3	20	
2-Chlorotoluene	0.0507	0.0520	0.0500	0.0500	101	104	75-128	3	15	
4-Chlorotoluene	0.0510	0.0513	0.0500	0.0500	102	103	78-127	1	16	
1,3-Dichlorobenzene	0.0518	0.0528	0.0500	0.0500	104	106	78-123	2	17	
1,4-Dichlorobenzene	0.0514	0.0507	0.0500	0.0500	103	101	77-121	1	17	
1,2-Dichlorobenzene	0.0508	0.0509	0.0500	0.0500	102	102	80-120	0	15	
1,2-Dibromo-3-chloropropane	0.0589	0.0607	0.0500	0.0500	118	121	61-137	3	28	
1,2,4-Trichlorobenzene	0.0602	0.0599	0.0500	0.0500	120	120	77-127	0	17	
Hexachlorobutadiene	0.0527	0.0514	0.0500	0.0500	105	103	77-125	2	22	
1,2,3-Trichlorobenzene	0.0543	0.0562	0.0500	0.0500	109	112	77-124	3	19	
Surrogate:										
Dibromofluoromethane					94	93	75-130			
Toluene-d8					103	99	78-128			
4-Bromofluorobenzene					110	102	71-130			



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 Project: Jorgensen UST Site Assessment

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
Dichlorodifluoromethane	ND	0.29	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	7.0	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-250-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
Dichlorodifluoromethane	ND	0.29	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	7.0	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	8-23-23	8-23-23	



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 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.40	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	1.0	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	8-23-23	8-23-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	92	75-127				
<i>Toluene-d8</i>	96	80-127				
<i>4-Bromofluorobenzene</i>	97	78-125				



Date of Report: August 31, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0823W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	6.83	6.26	10.0	10.0	68	63	34-166	9	21	
Chloromethane	10.2	10.2	10.0	10.0	102	102	63-138	0	18	
Vinyl Chloride	11.3	11.3	10.0	10.0	113	113	71-135	0	20	
Bromomethane	10.4	12.8	10.0	10.0	104	128	20-151	21	36	
Chloroethane	10.6	10.5	10.0	10.0	106	105	76-125	1	20	
Trichlorofluoromethane	9.70	10.2	10.0	10.0	97	102	75-131	5	19	
1,1-Dichloroethene	10.0	10.2	10.0	10.0	100	102	78-125	2	19	
Iodomethane	7.13	8.45	10.0	10.0	71	85	10-155	17	40	
Methylene Chloride	9.50	9.95	10.0	10.0	95	100	80-120	5	15	
(trans) 1,2-Dichloroethene	10.2	10.7	10.0	10.0	102	107	80-125	5	17	
Methyl t-Butyl Ether	10.2	10.5	10.0	10.0	102	105	80-122	3	15	
1,1-Dichloroethane	10.1	10.4	10.0	10.0	101	104	80-125	3	17	
2,2-Dichloropropane	12.4	13.1	10.0	10.0	124	131	80-146	5	21	
(cis) 1,2-Dichloroethene	10.7	11.1	10.0	10.0	107	111	80-129	4	17	
Bromochloromethane	10.4	10.8	10.0	10.0	104	108	80-125	4	18	
Chloroform	10.2	10.4	10.0	10.0	102	104	80-123	2	16	
1,1,1-Trichloroethane	10.3	10.5	10.0	10.0	103	105	80-123	2	18	
Carbon Tetrachloride	10.4	10.5	10.0	10.0	104	105	80-126	1	17	
1,1-Dichloropropene	10.4	10.5	10.0	10.0	104	105	80-126	1	18	
Benzene	10.4	10.6	10.0	10.0	104	106	80-121	2	16	
1,2-Dichloroethane	10.4	10.6	10.0	10.0	104	106	80-124	2	15	
Trichloroethene	10.1	10.2	10.0	10.0	101	102	80-122	1	18	
1,2-Dichloropropane	10.4	10.5	10.0	10.0	104	105	80-123	1	15	
Dibromomethane	10.5	10.5	10.0	10.0	105	105	80-123	0	15	
Bromodichloromethane	11.4	11.5	10.0	10.0	114	115	80-125	1	15	
(cis) 1,3-Dichloropropene	12.0	12.4	10.0	10.0	120	124	80-129	3	15	
Toluene	9.53	9.60	10.0	10.0	95	96	80-120	1	18	
(trans) 1,3-Dichloropropene	11.6	11.6	10.0	10.0	116	116	80-134	0	17	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0823W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	11.0	11.2	10.0	10.0	110	112	77-126	2	20	
Tetrachloroethene	10.1	10.7	10.0	10.0	101	107	80-124	6	18	
1,3-Dichloropropane	11.1	11.2	10.0	10.0	111	112	80-120	1	15	
Dibromochloromethane	10.3	10.4	10.0	10.0	103	104	80-128	1	15	
1,2-Dibromoethane	11.3	11.7	10.0	10.0	113	117	80-127	3	15	
Chlorobenzene	11.1	11.1	10.0	10.0	111	111	80-120	0	17	
1,1,1,2-Tetrachloroethane	11.7	11.9	10.0	10.0	117	119	80-125	2	17	
Ethylbenzene	11.2	11.2	10.0	10.0	112	112	80-125	0	18	
m,p-Xylene	22.2	22.3	20.0	20.0	111	112	80-127	0	18	
o-Xylene	11.0	10.9	10.0	10.0	110	109	80-126	1	18	
Bromoform	12.3	12.5	10.0	10.0	123	125	80-130	2	15	
Bromobenzene	11.4	11.6	10.0	10.0	114	116	76-128	2	16	
1,1,2,2-Tetrachloroethane	12.6	13.1	10.0	10.0	126	131	74-130	4	15	I
1,2,3-Trichloropropane	11.7	10.1	10.0	10.0	117	101	71-129	15	25	
2-Chlorotoluene	11.6	12.2	10.0	10.0	116	122	80-128	5	18	
4-Chlorotoluene	12.3	12.5	10.0	10.0	123	125	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.7	10.0	10.0	116	117	80-126	1	17	
1,4-Dichlorobenzene	11.5	11.7	10.0	10.0	115	117	80-121	2	17	
1,2-Dichlorobenzene	10.8	11.4	10.0	10.0	108	114	79-125	5	15	
1,2-Dibromo-3-chloropropane	10.5	11.2	10.0	10.0	105	112	73-133	6	15	
1,2,4-Trichlorobenzene	12.0	13.0	10.0	10.0	120	130	80-139	8	18	
Hexachlorobutadiene	12.2	12.7	10.0	10.0	122	127	80-151	4	18	
1,2,3-Trichlorobenzene	11.6	12.3	10.0	10.0	116	123	75-146	6	28	
Surrogate:										
Dibromofluoromethane					98	96	75-127			
Toluene-d8					99	98	80-127			
4-Bromofluorobenzene					106	104	78-125			



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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID:	08-250-10					
Naphthalene	0.055	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.0098	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	ND	0.0097	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo(j,k)fluoranthene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]pyrene	ND	0.010	EPA 8270E/SIM	8-24-23	8-25-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.0088	EPA 8270E/SIM	8-24-23	8-25-23	U1
Dibenz[a,h]anthracene	ND	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	86	39-111				
Pyrene-d10	74	47-114				
Terphenyl-d14	84	44-121				

Client ID: NT-SS-Dup-1-082223						
Laboratory ID:	08-250-11					
Naphthalene	0.058	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[a]anthracene	0.036	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Chrysene	0.052	0.0078	EPA 8270E/SIM	8-24-23	8-25-23	
Benzo[b]fluoranthene	ND	0.093	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo(j,k)fluoranthene	ND	0.015	EPA 8270E/SIM	8-24-23	8-25-23	U1
Benzo[a]pyrene	ND	0.10	EPA 8270E/SIM	8-24-23	8-25-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.026	EPA 8270E/SIM	8-24-23	8-25-23	U1
Dibenz[a,h]anthracene	ND	0.015	EPA 8270E/SIM	8-24-23	8-25-23	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	39-111				
Pyrene-d10	67	47-114				
Terphenyl-d14	76	44-121				



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 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	8-24-23	8-24-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>85</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>91</i>	<i>44-121</i>				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0794	0.0701	0.0833	0.0833	95	84	57-116	12	16	
Acenaphthylene	0.0798	0.0766	0.0833	0.0833	96	92	59-124	4	15	
Acenaphthene	0.0748	0.0706	0.0833	0.0833	90	85	59-124	6	15	
Fluorene	0.0770	0.0713	0.0833	0.0833	92	86	62-122	8	15	
Phenanthrene	0.0747	0.0702	0.0833	0.0833	90	84	62-119	6	15	
Anthracene	0.0761	0.0739	0.0833	0.0833	91	89	64-123	3	15	
Fluoranthene	0.0743	0.0735	0.0833	0.0833	89	88	63-123	1	15	
Pyrene	0.0715	0.0708	0.0833	0.0833	86	85	62-124	1	15	
Benzo[a]anthracene	0.0756	0.0765	0.0833	0.0833	91	92	59-131	1	15	
Chrysene	0.0716	0.0689	0.0833	0.0833	86	83	61-124	4	15	
Benzo[b]fluoranthene	0.0776	0.0767	0.0833	0.0833	93	92	60-126	1	15	
Benzo(j,k)fluoranthene	0.0726	0.0697	0.0833	0.0833	87	84	63-121	4	17	
Benzo[a]pyrene	0.0781	0.0760	0.0833	0.0833	94	91	60-122	3	15	
Indeno(1,2,3-c,d)pyrene	0.0897	0.0883	0.0833	0.0833	108	106	58-127	2	15	
Dibenz[a,h]anthracene	0.0894	0.0865	0.0833	0.0833	107	104	60-124	3	15	
Benzo[g,h,i]perylene	0.0821	0.0789	0.0833	0.0833	99	95	58-124	4	15	
Surrogate:										
2-Fluorobiphenyl					88	96	39-111			
Pyrene-d10					81	85	47-114			
Terphenyl-d14					89	92	44-121			



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Aroclor 1016	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.059	EPA 8082A	8-23-23	8-23-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 67 50-127</i>						
Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Aroclor 1016	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.059	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.059	EPA 8082A	8-23-23	8-23-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 68 50-127</i>						



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 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Aroclor 1016	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1221	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1232	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1242	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1248	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1254	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1260	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1262	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Aroclor 1268	ND	0.050	EPA 8082A	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-250-10									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.358	0.337	0.500	0.500	ND	72	67	41-121	6	28
Surrogate:										
DCB						76	74	50-127		



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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-35-6.5-082223						
Laboratory ID: 08-250-10						
Arsenic	ND	12	EPA 6010D	8-24-23	8-24-23	
Barium	27	2.9	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.59	EPA 6010D	8-24-23	8-24-23	
Chromium	8.7	0.59	EPA 6010D	8-24-23	8-24-23	
Copper	12	1.2	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.9	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.29	EPA 7471B	8-23-23	8-23-23	
Nickel	8.4	2.9	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	12	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.2	EPA 6010D	8-24-23	8-24-23	
Zinc	25	2.9	EPA 6010D	8-24-23	8-24-23	

Client ID: NT-SS-Dup-1-082223						
Laboratory ID: 08-250-11						
Arsenic	ND	12	EPA 6010D	8-24-23	8-24-23	
Barium	24	2.9	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.59	EPA 6010D	8-24-23	8-24-23	
Chromium	7.8	0.59	EPA 6010D	8-24-23	8-24-23	
Copper	11	1.2	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.9	EPA 6010D	8-24-23	8-24-23	
Mercury	ND	0.29	EPA 7471B	8-23-23	8-23-23	
Nickel	7.7	2.9	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	12	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.2	EPA 6010D	8-24-23	8-24-23	
Zinc	22	2.9	EPA 6010D	8-24-23	8-24-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824SM3					
Arsenic	ND	10	EPA 6010D	8-24-23	8-24-23	
Barium	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Cadmium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Chromium	ND	0.50	EPA 6010D	8-24-23	8-24-23	
Copper	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Lead	ND	5.0	EPA 6010D	8-24-23	8-24-23	
Nickel	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Selenium	ND	10	EPA 6010D	8-24-23	8-24-23	
Silver	ND	1.0	EPA 6010D	8-24-23	8-24-23	
Zinc	ND	2.5	EPA 6010D	8-24-23	8-24-23	
Laboratory ID:	MB0823S1					
Mercury	ND	0.25	EPA 7471B	8-23-23	8-23-23	



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**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-266-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	44.2	42.8	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	20.3	17.5	NA	NA	NA	NA	15	20
Copper	20.6	19.0	NA	NA	NA	NA	8	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Nickel	25.4	24.0	NA	NA	NA	NA	6	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	28.7	27.5	NA	NA	NA	NA	4	20

Laboratory ID:	08-218-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	08-266-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	99.9	99.3	100	100	ND	100	99	75-125	1	20
Barium	147	148	100	100	44.2	103	104	75-125	1	20
Cadmium	47.2	46.9	50.0	50.0	ND	94	94	75-125	1	20
Chromium	119	120	100	100	20.3	98	99	75-125	1	20
Copper	69.5	69.5	50.0	50.0	20.6	98	98	75-125	0	20
Lead	249	248	250	250	ND	100	99	75-125	0	20
Nickel	120	121	100	100	25.4	95	95	75-125	0	20
Selenium	95.9	96.3	100	100	ND	96	96	75-125	0	20
Silver	23.5	22.9	25.0	25.0	ND	94	91	75-125	3	20
Zinc	129	130	100	100	28.7	100	101	75-125	1	20

Laboratory ID:	08-218-01									
Mercury	0.507	0.509	0.500	0.500	0.0124	99	99	80-120	0	20



Date of Report: August 31, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250
 Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-SS-24-2.0-082123	08-250-01	18	8-28-23
NT-piping-SS-25-2.0-082123	08-250-02	17	8-28-23
NT-piping-SS-26-2.0-082123	08-250-03	16	8-28-23
NT-SS-29-6.5-082223	08-250-04	13	8-28-23
NT-SS-30-6.5-082223	08-250-05	13	8-28-23
NT-SS-31-6.5-082223	08-250-06	13	8-28-23
NT-SS-32-6.5-082223	08-250-07	17	8-28-23
NT-SS-33-6.5-082223	08-250-08	18	8-28-23
NT-SS-34-6.5-082223	08-250-09	16	8-28-23
NT-SS-35-6.5-082223	08-250-10	15	8-23-23
NT-SS-Dup-1-082223	08-250-11	15	8-23-23
ST-SS-8-8.5-082223	08-250-12	21	8-28-23
ST-SS-7-8.5-082223	08-250-13	20	8-28-23
ST-SS-6-8.5-082223	08-250-14	19	8-28-23
ST-SS-1-8.5-082223	08-250-15	25	8-28-23
ST-SS-2-8.5-082223	08-250-16	24	8-28-23
ST-SS-Dup-2-082223	08-250-17	25	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



OnSite Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. 08 - 250

Requested Analysis

Company:

DH Environmental

Project No.:

Project Name:

Jorgensen UST Site Assessment

Project Manager:

N. Moxley

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Day

☐ 3 Day

☒ Standard 5-day

(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

(other)

Lab ID

Sample Identification

Date Sampled

Time Sampled

Matrix

of Cont.

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8) + Cu, Ni, Zn

Priority Pollutant Metals (13)

TCLP Metals

VPH

EPH

% Moisture

RELINQUISHED BY

FIRM DHE

DATE 8/22/23

TIME 1635

RECEIVED BY Nicholas B. [Signature]

FIRM OSE

DATE 8/22/23

TIME 1635

COMMENTS:
~~None~~ NM
- Please report lowest possible reporting limits
- Samples may have high petroleum concentrations

RELINQUISHED BY

DATE

RECEIVED BY

DATE

FIRM

TIME

FIRM

TIME

REVIEWED BY

DATE REVIEWED

Chromatographs with final report ☐



OnSite Environmental Inc.
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Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Turnaround Request (in working days)				Project Manager:		Laboratory No. 08-250	
(Check One)				Requested Analysis			
☐ Same Day	☐ 1 Day						
☐ 2 Day	☐ 3 Day						
☒ Standard 5-day							
(Hydrocarbon analyses: 5 days, All other analyses: 7 days)							
☐ (other)							
Company:	DK Environmental						
Project No.:							
Project Name:	Tompson UT Site Assessment						
Project Manager:	N. Moxley						
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.		
13	ST-SS-7-8.5-082223	8/22/23	1240	Soil	5		
14	ST-SS-6-8.5-082223		1250				
15	ST-SS-1-8.5-082223		1310				
16	ST-SS-2-8.5-082223		1320				
17	ST-SS-Dup-2-082223	8/22/23	0930				
18	Trip Blank	8/22/23	1500	Water	3		
						NWTPH-HCID	
						NWTPH-Gx/BTEX	
						NWTPH-Dx	
						Volatiles by 8200B	
						Halogenated Volatiles by 8200B	
						Semivolatiles by 8270C	
						PAHs by 8270C	
						PCB's by 8082	
						Pesticides by 8081	
						Herbicides by 8151A	
						Total RCRA Metals (8)	
						Priority Pollutant Metals (13)	
						TCLP Metals	
						VPH	
						EPH	
						% Moisture	

RELINQUISHED BY	DATE	RECEIVED BY	DATE	COMMENTS:
<i>[Signature]</i>	8/22/23	Nichelle Eplin	8/22/23	
FIRM	TIME	FIRM	TIME	
DK	1635	OSE	1635	
RELINQUISHED BY	DATE	RECEIVED BY	DATE	
FIRM	TIME	FIRM	TIME	
REVIEWED BY	DATE REVIEWED			

Chromatographs with final report ☐



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September 20, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-250B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-250B
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 21 and 22, 2023 and received by the laboratory on August 22, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for 1,1-Dichloropropene and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank and Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

The client requested the analysis of sample NT-piping-SS-24-2.0-082123 after the holding time had expired.

PAHs EPA 8270E/SIM Analysis

Sample NT-SS-31-6.5-082223 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

The client requested the analysis of sample NT-piping-SS-24-2.0-082123 after the holding time had expired.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results

The Matrix Spike/ Matrix Spike Duplicate recoveries for Chromium are outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 99%

Due to the high concentration of Nickel in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 102%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Dichlorodifluoromethane	ND	0.0018	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0090	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0079	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0075	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0058	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0023	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.058	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.29	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.058	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>93</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>87</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>90</i>	<i>71-130</i>				



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0063	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0056	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0053	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0041	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00082	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.0040	0.0016	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.0044	0.00082	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0041	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.054	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.27	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.054	EPA 8260D	9-5-23	9-5-23	
Surrogate: Percent Recovery Control Limits						
Dibromofluoromethane	85	75-130				
Toluene-d8	92	78-128				
4-Bromofluorobenzene	108	71-130				



Date of Report: September 20, 2023
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Dichlorodifluoromethane	ND	0.077	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.40	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.067	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.35	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.33	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.067	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.51	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.26	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
(trans) 1,3-Dichloropropene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.12	0.10	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.078	0.051	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.26	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.051	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.26	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.26	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.051	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>81</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Dichlorodifluoromethane	ND	0.092	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.47	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.079	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.42	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.39	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.079	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.61	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Toluene	0.33	0.31	EPA 8260D	9-5-23	9-5-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		ST-SS-8-8.5-082223				
Laboratory ID:		08-250-12				
(trans) 1,3-Dichloropropene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	0.80	0.061	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	4.6	0.12	EPA 8260D	9-5-23	9-5-23	
o-Xylene	1.9	0.061	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.31	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.061	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.31	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.31	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.061	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>84</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



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 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0072	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0060	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0047	EPA 8260D	9-5-23	9-5-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		ST-SS-7-8.5-082223				
Laboratory ID:		08-250-13				
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	0.0060	0.0019	EPA 8260D	9-5-23	9-5-23	
o-Xylene	0.0036	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0077	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0068	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0050	EPA 8260D	9-5-23	9-5-23	



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 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0341	0.0327	0.0500	0.0500	68	65	30-160	4	26	
Chloromethane	0.0326	0.0317	0.0500	0.0500	65	63	59-131	3	26	
Vinyl Chloride	0.0371	0.0356	0.0500	0.0500	74	71	68-136	4	23	
Bromomethane	0.0366	0.0366	0.0500	0.0500	73	73	48-155	0	32	
Chloroethane	0.0416	0.0392	0.0500	0.0500	83	78	67-141	6	16	
Trichlorofluoromethane	0.0463	0.0437	0.0500	0.0500	93	87	76-127	6	19	
1,1-Dichloroethene	0.0430	0.0402	0.0500	0.0500	86	80	75-129	7	19	
Iodomethane	0.0424	0.0371	0.0500	0.0500	85	74	37-140	13	27	
Methylene Chloride	0.0388	0.0386	0.0500	0.0500	78	77	60-124	1	18	
(trans) 1,2-Dichloroethene	0.0442	0.0408	0.0500	0.0500	88	82	79-133	8	15	
Methyl t-Butyl Ether	0.0426	0.0398	0.0500	0.0500	85	80	73-125	7	17	
1,1-Dichloroethane	0.0436	0.0412	0.0500	0.0500	87	82	79-125	6	17	
2,2-Dichloropropane	0.0504	0.0465	0.0500	0.0500	101	93	79-126	8	18	
(cis) 1,2-Dichloroethene	0.0407	0.0436	0.0500	0.0500	81	87	75-131	7	15	
Bromochloromethane	0.0456	0.0445	0.0500	0.0500	91	89	80-126	2	15	
Chloroform	0.0436	0.0410	0.0500	0.0500	87	82	80-123	6	15	
1,1,1-Trichloroethane	0.0418	0.0389	0.0500	0.0500	84	78	78-124	7	21	
Carbon Tetrachloride	0.0401	0.0395	0.0500	0.0500	80	79	74-127	2	18	
1,1-Dichloropropene	0.0372	0.0368	0.0500	0.0500	74	74	80-123	1	15	I,I
Benzene	0.0435	0.0408	0.0500	0.0500	87	82	80-122	6	18	
1,2-Dichloroethane	0.0449	0.0413	0.0500	0.0500	90	83	75-124	8	15	
Trichloroethene	0.0514	0.0490	0.0500	0.0500	103	98	80-129	5	18	
1,2-Dichloropropane	0.0491	0.0472	0.0500	0.0500	98	94	80-123	4	15	
Dibromomethane	0.0462	0.0448	0.0500	0.0500	92	90	80-123	3	15	
Bromodichloromethane	0.0503	0.0480	0.0500	0.0500	101	96	80-129	5	15	
(cis) 1,3-Dichloropropene	0.0508	0.0486	0.0500	0.0500	102	97	80-130	4	15	
Toluene	0.0466	0.0449	0.0500	0.0500	93	90	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0568	0.0544	0.0500	0.0500	114	109	80-124	4	15	



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0487	0.0467	0.0500	0.0500	97	93	80-120	4	15	
Tetrachloroethene	0.0595	0.0600	0.0500	0.0500	119	120	77-126	1	15	
1,3-Dichloropropane	0.0521	0.0517	0.0500	0.0500	104	103	77-123	1	15	
Dibromochloromethane	0.0555	0.0531	0.0500	0.0500	111	106	80-128	4	16	
1,2-Dibromoethane	0.0536	0.0487	0.0500	0.0500	107	97	80-122	10	20	
Chlorobenzene	0.0534	0.0523	0.0500	0.0500	107	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0497	0.0500	0.0500	105	99	80-120	6	15	
Ethylbenzene	0.0539	0.0532	0.0500	0.0500	108	106	80-120	1	15	
m,p-Xylene	0.107	0.104	0.100	0.100	107	104	80-120	3	15	
o-Xylene	0.0541	0.0531	0.0500	0.0500	108	106	80-120	2	15	
Bromoform	0.0537	0.0517	0.0500	0.0500	107	103	78-126	4	15	
Bromobenzene	0.0548	0.0555	0.0500	0.0500	110	111	79-124	1	15	
1,1,2,2-Tetrachloroethane	0.0536	0.0519	0.0500	0.0500	107	104	75-122	3	17	
1,2,3-Trichloropropane	0.0529	0.0508	0.0500	0.0500	106	102	72-125	4	20	
2-Chlorotoluene	0.0614	0.0596	0.0500	0.0500	123	119	75-128	3	15	
4-Chlorotoluene	0.0590	0.0586	0.0500	0.0500	118	117	78-127	1	16	
1,3-Dichlorobenzene	0.0595	0.0590	0.0500	0.0500	119	118	78-123	1	17	
1,4-Dichlorobenzene	0.0599	0.0587	0.0500	0.0500	120	117	77-121	2	17	
1,2-Dichlorobenzene	0.0569	0.0564	0.0500	0.0500	114	113	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0610	0.0578	0.0500	0.0500	122	116	61-137	5	28	
1,2,4-Trichlorobenzene	0.0659	0.0661	0.0500	0.0500	132	132	77-127	0	17	I,I
Hexachlorobutadiene	0.0582	0.0601	0.0500	0.0500	116	120	77-125	3	22	
1,2,3-Trichlorobenzene	0.0592	0.0607	0.0500	0.0500	118	121	77-124	3	19	
Surrogate:										
Dibromofluoromethane					84	84	75-130			
Toluene-d8					92	94	78-128			
4-Bromofluorobenzene					100	103	71-130			



Date of Report: September 20, 2023
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 Laboratory Reference: 2308-250B
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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Naphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	0.038	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[b]fluoranthene	0.056	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	0.062	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno(1,2,3-c,d)pyrene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.033	EPA 8270E/SIM	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	65	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	84	44-121				

Client ID: NT-SS-31-6.5-082223

Laboratory ID: 08-250-06						
Naphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.15	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	81	39-111				
Pyrene-d10	110	47-114				
Terphenyl-d14	122	44-121				

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Date of Report: September 20, 2023
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 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Naphthalene	0.25	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	0.17	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	11	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.16	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	97	39-111				
Pyrene-d10	109	47-114				
Terphenyl-d14	94	44-121				

Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Naphthalene	2.9	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	21	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	17	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	39-111				
Pyrene-d10	100	47-114				
Terphenyl-d14	93	44-121				



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Naphthalene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
2-Methylnaphthalene	0.66	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
1-Methylnaphthalene	1.0	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Chrysene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[b]fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Benzo[a]pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Indeno(1,2,3-c,d)pyrene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.17	EPA 8270E/SIM	9-5-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	102	47-114				
Terphenyl-d14	96	44-121				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>90</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>81</i>	<i>44-121</i>				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0610	0.0623	0.0833	0.0833	73	75	57-116	2	16	
Acenaphthylene	0.0624	0.0649	0.0833	0.0833	75	78	59-124	4	15	
Acenaphthene	0.0610	0.0630	0.0833	0.0833	73	76	59-124	3	15	
Fluorene	0.0637	0.0664	0.0833	0.0833	76	80	62-122	4	15	
Phenanthrene	0.0650	0.0679	0.0833	0.0833	78	82	62-119	4	15	
Anthracene	0.0696	0.0722	0.0833	0.0833	84	87	64-123	4	15	
Fluoranthene	0.0743	0.0770	0.0833	0.0833	89	92	63-123	4	15	
Pyrene	0.0719	0.0743	0.0833	0.0833	86	89	62-124	3	15	
Benzo[a]anthracene	0.0786	0.0804	0.0833	0.0833	94	97	59-131	2	15	
Chrysene	0.0784	0.0804	0.0833	0.0833	94	97	61-124	3	15	
Benzo[b]fluoranthene	0.0769	0.0832	0.0833	0.0833	92	100	60-126	8	15	
Benzo[j,k]fluoranthene	0.0861	0.0827	0.0833	0.0833	103	99	63-121	4	17	
Benzo[a]pyrene	0.0804	0.0818	0.0833	0.0833	97	98	60-122	2	15	
Indeno(1,2,3-c,d)pyrene	0.0812	0.0832	0.0833	0.0833	97	100	58-127	2	15	
Dibenz[a,h]anthracene	0.0839	0.0855	0.0833	0.0833	101	103	60-124	2	15	
Benzo[g,h,i]perylene	0.0845	0.0865	0.0833	0.0833	101	104	58-124	2	15	
Surrogate:										
2-Fluorobiphenyl					73	74	39-111			
Pyrene-d10					94	96	47-114			
Terphenyl-d14					87	88	44-121			



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Aroclor 1016	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	0.29	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	0.23	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.061	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.061	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 81 50-127</i>						
Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
Aroclor 1016	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.058	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.058	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 53 50-127</i>						
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Aroclor 1016	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.060	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.060	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 72 50-127</i>						



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-8-8.5-082223						
Laboratory ID: 08-250-12						
Aroclor 1016	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.063	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.063	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 71 50-127</i>						
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Aroclor 1016	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1221	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1232	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1242	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1248	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1254	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1260	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1262	ND	0.062	EPA 8082A	9-6-23	9-7-23	
Aroclor 1268	ND	0.062	EPA 8082A	9-6-23	9-7-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 76 50-127</i>						



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-6-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0906S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.440	0.457	0.500	0.500	N/A	88	91	55-119	4	34
Surrogate:										
DCB						87	92	50-127		



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-piping-SS-24-2.0-082123						
Laboratory ID: 08-250-01						
Arsenic	27	12	EPA 6010D	9-13-23	9-13-23	
Barium	65	3.1	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.61	EPA 6010D	9-13-23	9-13-23	
Chromium	100	0.61	EPA 6010D	9-13-23	9-13-23	
Copper	150	1.2	EPA 6010D	9-14-23	9-15-23	
Lead	140	6.1	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.31	EPA 7471B	9-8-23	9-8-23	
Nickel	910	31	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	190	3.1	EPA 6010D	9-13-23	9-13-23	

Client ID: NT-SS-31-6.5-082223						
Laboratory ID: 08-250-06						
Arsenic	39	12	EPA 6010D	9-13-23	9-13-23	
Barium	26	2.9	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.58	EPA 6010D	9-13-23	9-13-23	
Chromium	7.2	0.58	EPA 6010D	9-13-23	9-13-23	
Copper	17	1.2	EPA 6010D	9-14-23	9-19-23	
Lead	ND	5.8	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.29	EPA 7471B	9-8-23	9-8-23	
Nickel	12	2.9	EPA 6010D	9-14-23	9-19-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	19	2.9	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-34-6.5-082223						
Laboratory ID: 08-250-09						
Arsenic	ND	12	EPA 6010D	9-13-23	9-13-23	
Barium	24	3.0	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.60	EPA 6010D	9-13-23	9-13-23	
Chromium	7.0	0.60	EPA 6010D	9-13-23	9-13-23	
Copper	11	1.2	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.0	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.30	EPA 7471B	9-8-23	9-8-23	
Nickel	8.1	3.0	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	21	3.0	EPA 6010D	9-13-23	9-13-23	

Client ID: ST-SS-8-8.5-082223

Laboratory ID: 08-250-12

Arsenic	ND	13	EPA 6010D	9-13-23	9-13-23	
Barium	28	3.2	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.63	EPA 6010D	9-13-23	9-13-23	
Chromium	7.9	0.63	EPA 6010D	9-13-23	9-13-23	
Copper	10	1.3	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.3	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.32	EPA 7471B	9-8-23	9-8-23	
Nickel	7.6	3.2	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	13	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.3	EPA 6010D	9-13-23	9-13-23	
Zinc	23	3.2	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-7-8.5-082223						
Laboratory ID: 08-250-13						
Arsenic	ND	12	EPA 6010D	9-13-23	9-13-23	
Barium	23	3.1	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.62	EPA 6010D	9-13-23	9-13-23	
Chromium	7.7	0.62	EPA 6010D	9-13-23	9-13-23	
Copper	8.1	1.2	EPA 6010D	9-14-23	9-18-23	
Lead	ND	6.2	EPA 6010D	9-13-23	9-13-23	
Mercury	ND	0.31	EPA 7471B	9-8-23	9-8-23	
Nickel	6.5	3.1	EPA 6010D	9-14-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.2	EPA 6010D	9-13-23	9-13-23	
Zinc	19	3.1	EPA 6010D	9-13-23	9-13-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913SM2					
Arsenic	ND	10	EPA 6010D	9-13-23	9-13-23	
Barium	ND	2.5	EPA 6010D	9-13-23	9-13-23	
Cadmium	ND	0.50	EPA 6010D	9-13-23	9-13-23	
Chromium	ND	0.50	EPA 6010D	9-13-23	9-13-23	
Lead	ND	5.0	EPA 6010D	9-13-23	9-13-23	
Selenium	ND	10	EPA 6010D	9-13-23	9-13-23	
Silver	ND	1.0	EPA 6010D	9-13-23	9-13-23	
Zinc	ND	2.5	EPA 6010D	9-13-23	9-13-23	
Laboratory ID:	MB0908S2					
Mercury	ND	0.25	EPA 7471B	9-8-23	9-8-23	
Laboratory ID:	MB0914SM1					
Copper	ND	1.0	EPA 6010D	9-14-23	9-15-23	
Nickel	ND	2.5	EPA 6010D	9-14-23	9-15-23	



Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-250-01							
	ORIG	DUP						
Arsenic	22.2	20.0	NA	NA	NA	NA	10	20
Barium	53.4	55.3	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	82.4	51.4	NA	NA	NA	NA	46	20
Lead	117	136	NA	NA	NA	NA	15	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	159	160	NA	NA	NA	NA	1	20

Laboratory ID:	09-037-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	08-250-01							
	ORIG	DUP						
Copper	124	128	NA	NA	NA	NA	3	20
Nickel	741	761	NA	NA	NA	NA	3	20

MATRIX SPIKES

Laboratory ID:	08-250-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	117	116	100	100	22.2	95	94	75-125	1	20
Barium	155	149	100	100	53.4	102	96	75-125	4	20
Cadmium	45.0	45.4	50.0	50.0	ND	90	91	75-125	1	20
Chromium	150	144	100	100	82.4	67	62	75-125	4	20
Lead	359	352	250	250	117	97	94	75-125	2	20
Selenium	91.4	92.5	100	100	ND	91	93	75-125	1	20
Silver	23.6	23.7	25.0	25.0	ND	94	95	75-125	1	20
Zinc	260	248	100	100	159	101	89	75-125	5	20

Laboratory ID:	09-037-01									
Mercury	0.515	0.524	0.500	0.500	0.0352	96	98	80-120	2	20

Laboratory ID:	08-250-01									
	MS	MSD	MS	MSD		MS	MSD			
Copper	179	166	50.0	50.0	124	111	85	75-125	7	20
Nickel	812	815	100	100	741	71	74	75-125	0	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 20, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-250B
 Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-piping-SS-24-2.0-082123	08-250-01	18	8-28-23
NT-SS-31-6.5-082223	08-250-06	13	8-28-23
NT-SS-34-6.5-082223	08-250-09	16	8-28-23
ST-SS-8-8.5-082223	08-250-12	21	8-28-23
ST-SS-7-8.5-082223	08-250-13	20	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Company: DH Environmental		Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☒ Standard 5-day (Hydrocarbon analyses: 5 days, All other analyses: 7 days)		Project Manager:		Laboratory No. 08-250	
Project Name: Torgensen UST Site Assessment				Requested Analysis			
Project Manager: N. Moxley							
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.		
1	NT-Piping-SS-24-2.0-082123	8/21/23	1110	Soil	5		
2	NT-Piping-SS-25-2.0-082123		1115				
3	NT-Piping-SS-26-2.0-082123		1120				
4	NT-SS-29-6.5-082223	8/22/23	1200				
5	NT-SS-30-6.5-082223		1150				
6	NT-SS-31-6.5-082223		1140				
7	NT-SS-32-6.5-082223		1130				
8	NT-SS-33-6.5-082223		1120				
9	NT-SS-34-6.5-082223		1110				
10	NT-SS-35-6.5-082223		1100				
11	NT-SS-Dip-1-082223		6900				
12	ST-SS-8-8.5-082223		1230				
RELINQUISHED BY DHE		DATE 8/22/23	RECEIVED BY Nicholas B. [Signature]		DATE 8/22/23	COMMENTS: Please report lowest possible reporting limits - Samples may have high petroleum concentrations - Added 9/5/23 NB (STA)	
RELINQUISHED BY		DATE	RECEIVED BY		DATE		
FIRM		TIME	FIRM		TIME		
FIRM		TIME	FIRM		TIME		
REVIEWED BY		DATE REVIEWED		Chromatographs with final report ☐			

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Final EDD



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Chain of Custody

Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Turnaround Request
(in working days)

Project Manager:

Laboratory No. 08-250

Company:

DE Environmental

Project No.:

Project Name:

Torresion UT Site Assessment

Project Manager:

N. Moxley

Lab ID

Sample Identification

Date Sampled

Time Sampled

Matrix

of Cont.

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C

PCB's by 8082

Pesticides by 8081

Herbicides by 8151A

Total RCRA Metals (8)+Cu,Ni,2n

Priority Pollutant Metals (13)

TCLP Metals

VPH

EPH

% Moisture

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Day

☐ 3 Day

☒ Standard 5-day
(Hydrocarbon analyses: 5 days,
All other analyses: 7 days)

☐ (other)

Requested Analysis

RELINQUISHED BY

FIRM

RELINQUISHED BY

FIRM

REVIEWED BY

DATE

TIME

DATE

TIME

RECEIVED BY

FIRM

RECEIVED BY

FIRM

DATE

TIME

DATE

TIME

COMMENTS:

Chromatographs with final report ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2308-315

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 29, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on August 28, 2023 and received by the laboratory on August 29, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID:	08-315-01					
Gasoline Range Organics	480	5.0	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: NT-SS-18-5.0-082823						
Laboratory ID:	08-315-02					
Gasoline Range Organics	180	5.7	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID: NT-SS-19-5.0-082823						
Laboratory ID:	08-315-03					
Gasoline	ND	6.2	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				
Client ID: NT-SS-16-5.0-082823						
Laboratory ID:	08-315-04					
Gasoline	ND	6.0	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				
Client ID: NT-SS-15-5.0-082823						
Laboratory ID:	08-315-05					
Gasoline Range Organics	110	5.1	NWTPH-Gx	8-29-23	8-29-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829S2					
Gasoline	ND	5.0	NWTPH-Gx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-315-01							
	ORIG	DUP						
GRO	413	372	NA	NA	NA	NA	10	30
Surrogate:								
Fluorobenzene				83	85	65-126		



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
Gasoline	ND	100	NWTPH-Gx	8-30-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	65-122				



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0830W1					
Gasoline	ND	100	NWTPH-Gx	8-30-23	8-30-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	92	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-10							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				91	89	65-122		



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-17-5.0-082823					
Laboratory ID:	08-315-01					
Diesel Range Organics	25000	2900	NWTPH-Dx	8-31-23	9-1-23	N
Lube Oil	200000	5900	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				
						S

Client ID:	NT-SS-18-5.0-082823					
Laboratory ID:	08-315-02					
Diesel Range Organics	2500	310	NWTPH-Dx	8-31-23	9-1-23	N
Lube Oil	21000	620	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				
						S

Client ID:	NT-SS-19-5.0-082823					
Laboratory ID:	08-315-03					
Diesel Range Organics	ND	33	NWTPH-Dx	8-31-23	9-1-23	
Lube Oil Range Organics	ND	66	NWTPH-Dx	8-31-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	NT-SS-16-5.0-082823					
Laboratory ID:	08-315-04					
Diesel Range Organics	ND	30	NWTPH-Dx	8-31-23	8-31-23	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	70	50-150				

Client ID:	NT-SS-15-5.0-082823					
Laboratory ID:	08-315-05					
Diesel Fuel #2	210	30	NWTPH-Dx	8-31-23	8-31-23	N
Lube Oil	910	60	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				



Date of Report: September 5, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315
 Project: Star Forge UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0831S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-31-23	8-31-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-31-23	8-31-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-315-01							
	ORIG	DUP						
Diesel Range Organics	21400	18000	NA	NA	NA	NA	17	40
Lube Oil	172000	141000	NA	NA	NA	NA	20	40
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				---	---	50-150		S,S



Date of Report: September 5, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-17-5.0-082823	08-315-01	15	8-31-23
NT-SS-18-5.0-082823	08-315-02	19	8-31-23
NT-SS-19-5.0-082823	08-315-03	24	8-31-23
NT-SS-16-5.0-082823	08-315-04	17	8-31-23
NT-SS-15-5.0-082823	08-315-05	16	8-31-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onste-env.com

Chain of Custody

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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 18, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2308-315B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 29, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 18, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315B
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on August 28, 2023 and received by the laboratory on August 29, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Methylene Chloride, Bromobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank and/or Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Some MTCA Method A cleanup levels are non-achievable for sample NT-SS-17-5.0-082823 due to the necessary dilution of the sample.

The value reported for o-Xylene in sample NT-SS-18-5.0-082823 exceeds the calibration range and is therefore an estimate. The sample was re-analyzed at the lowest possible dilution allowed by Method 5035A with non-detect results for o-Xylene.

Total Metals EPA 6010D/7471B Analysis

The Matrix Spike/ Matrix Spike Duplicate recoveries for Nickel are outside control limits due to matrix inhomogeneity. The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 92%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Dichlorodifluoromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.25	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.25	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
(trans) 1,3-Dichloropropene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	0.065	0.050	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	0.26	0.10	EPA 8260D	9-7-23	9-7-23	
o-Xylene	0.28	0.050	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	0.25	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>71-130</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Dichlorodifluoromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.0076	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	0.0030	0.00095	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	0.0037	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.0047	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	0.0031	0.00095	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	0.15	0.00095	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	0.12	0.0019	EPA 8260D	9-7-23	9-7-23	
o-Xylene	0.27	0.00095	EPA 8260D	9-7-23	9-7-23	E
Bromoform	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.0047	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	0.0080	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	0.0050	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907S2					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-130</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0907S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0403	0.0404	0.0500	0.0500	81	81	30-160	0	26	
Chloromethane	0.0474	0.0475	0.0500	0.0500	95	95	59-131	0	26	
Vinyl Chloride	0.0486	0.0483	0.0500	0.0500	97	97	68-136	1	23	
Bromomethane	0.0506	0.0506	0.0500	0.0500	101	101	48-155	0	32	
Chloroethane	0.0453	0.0466	0.0500	0.0500	91	93	67-141	3	16	
Trichlorofluoromethane	0.0485	0.0493	0.0500	0.0500	97	99	76-127	2	19	
1,1-Dichloroethene	0.0473	0.0471	0.0500	0.0500	95	94	75-129	0	19	
Iodomethane	0.0445	0.0464	0.0500	0.0500	89	93	37-140	4	27	
Methylene Chloride	0.0959	0.0989	0.0500	0.0500	192	198	60-124	3	18	I,I
(trans) 1,2-Dichloroethene	0.0462	0.0472	0.0500	0.0500	92	94	79-133	2	15	
Methyl t-Butyl Ether	0.0444	0.0459	0.0500	0.0500	89	92	73-125	3	17	
1,1-Dichloroethane	0.0460	0.0460	0.0500	0.0500	92	92	79-125	0	17	
2,2-Dichloropropane	0.0457	0.0474	0.0500	0.0500	91	95	79-126	4	18	
(cis) 1,2-Dichloroethene	0.0459	0.0467	0.0500	0.0500	92	93	75-131	2	15	
Bromochloromethane	0.0456	0.0473	0.0500	0.0500	91	95	80-126	4	15	
Chloroform	0.0456	0.0474	0.0500	0.0500	91	95	80-123	4	15	
1,1,1-Trichloroethane	0.0468	0.0478	0.0500	0.0500	94	96	78-124	2	21	
Carbon Tetrachloride	0.0473	0.0495	0.0500	0.0500	95	99	74-127	5	18	
1,1-Dichloropropene	0.0472	0.0493	0.0500	0.0500	94	99	80-123	4	15	
Benzene	0.0466	0.0472	0.0500	0.0500	93	94	80-122	1	18	
1,2-Dichloroethane	0.0439	0.0452	0.0500	0.0500	88	90	75-124	3	15	
Trichloroethene	0.0502	0.0522	0.0500	0.0500	100	104	80-129	4	18	
1,2-Dichloropropane	0.0482	0.0505	0.0500	0.0500	96	101	80-123	5	15	
Dibromomethane	0.0474	0.0529	0.0500	0.0500	95	106	80-123	11	15	
Bromodichloromethane	0.0489	0.0518	0.0500	0.0500	98	104	80-129	6	15	
(cis) 1,3-Dichloropropene	0.0508	0.0537	0.0500	0.0500	102	107	80-130	6	15	
Toluene	0.0461	0.0499	0.0500	0.0500	92	100	80-120	8	18	
(trans) 1,3-Dichloropropene	0.0538	0.0574	0.0500	0.0500	108	115	80-124	6	15	



Date of Report: September 18, 2023
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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0907S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0527	0.0571	0.0500	0.0500	105	114	80-120	8	15	
Tetrachloroethene	0.0584	0.0613	0.0500	0.0500	117	123	77-126	5	15	
1,3-Dichloropropane	0.0521	0.0560	0.0500	0.0500	104	112	77-123	7	15	
Dibromochloromethane	0.0552	0.0591	0.0500	0.0500	110	118	80-128	7	16	
1,2-Dibromoethane	0.0532	0.0586	0.0500	0.0500	106	117	80-122	10	20	
Chlorobenzene	0.0538	0.0560	0.0500	0.0500	108	112	80-120	4	18	
1,1,1,2-Tetrachloroethane	0.0536	0.0558	0.0500	0.0500	107	112	80-120	4	15	
Ethylbenzene	0.0554	0.0591	0.0500	0.0500	111	118	80-120	6	15	
m,p-Xylene	0.109	0.114	0.100	0.100	109	114	80-120	4	15	
o-Xylene	0.0542	0.0565	0.0500	0.0500	108	113	80-120	4	15	
Bromoform	0.0523	0.0566	0.0500	0.0500	105	113	78-126	8	15	
Bromobenzene	0.0599	0.0624	0.0500	0.0500	120	125	79-124	4	15	I
1,1,2,2-Tetrachloroethane	0.0552	0.0611	0.0500	0.0500	110	122	75-122	10	17	
1,2,3-Trichloropropane	0.0564	0.0610	0.0500	0.0500	113	122	72-125	8	20	
2-Chlorotoluene	0.0574	0.0609	0.0500	0.0500	115	122	75-128	6	15	
4-Chlorotoluene	0.0595	0.0636	0.0500	0.0500	119	127	78-127	7	16	
1,3-Dichlorobenzene	0.0567	0.0603	0.0500	0.0500	113	121	78-123	6	17	
1,4-Dichlorobenzene	0.0580	0.0608	0.0500	0.0500	116	122	77-121	5	17	I
1,2-Dichlorobenzene	0.0592	0.0611	0.0500	0.0500	118	122	80-120	3	15	I
1,2-Dibromo-3-chloropropane	0.0554	0.0658	0.0500	0.0500	111	132	61-137	17	28	
1,2,4-Trichlorobenzene	0.0620	0.0644	0.0500	0.0500	124	129	77-127	4	17	I
Hexachlorobutadiene	0.0564	0.0562	0.0500	0.0500	113	112	77-125	0	22	
1,2,3-Trichlorobenzene	0.0659	0.0683	0.0500	0.0500	132	137	77-124	4	19	I,I
Surrogate:										
Dibromofluoromethane					92	89	75-130			
Toluene-d8					94	93	78-128			
4-Bromofluorobenzene					100	101	71-130			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	7.5	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip Blank					
Laboratory ID:	08-315-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloromethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromomethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Chloroethane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Iodomethane	ND	7.5	EPA 8260D	9-7-23	9-7-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chloroform	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Benzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Trichloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromomethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Toluene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-7-23	9-7-23	



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VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-7-23	9-7-23	
o-Xylene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Bromoform	ND	1.0	EPA 8260D	9-7-23	9-7-23	
Bromobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-7-23	9-7-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-7-23	9-7-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-7-23	9-7-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0907W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	11.8	11.1	10.0	10.0	118	111	34-166	6	21	
Chloromethane	10.5	10.1	10.0	10.0	105	101	63-138	4	18	
Vinyl Chloride	10.1	9.56	10.0	10.0	101	96	71-135	5	20	
Bromomethane	9.19	10.7	10.0	10.0	92	107	20-151	15	36	
Chloroethane	8.90	8.80	10.0	10.0	89	88	76-125	1	20	
Trichlorofluoromethane	9.33	9.29	10.0	10.0	93	93	75-131	0	19	
1,1-Dichloroethene	9.57	9.40	10.0	10.0	96	94	78-125	2	19	
Iodomethane	6.69	7.28	10.0	10.0	67	73	10-155	8	40	
Methylene Chloride	8.37	8.87	10.0	10.0	84	89	80-120	6	15	
(trans) 1,2-Dichloroethene	9.63	9.41	10.0	10.0	96	94	80-125	2	17	
Methyl t-Butyl Ether	9.73	9.14	10.0	10.0	97	91	80-122	6	15	
1,1-Dichloroethane	9.30	9.15	10.0	10.0	93	92	80-125	2	17	
2,2-Dichloropropane	11.7	11.7	10.0	10.0	117	117	80-146	0	21	
(cis) 1,2-Dichloroethene	9.50	9.48	10.0	10.0	95	95	80-129	0	17	
Bromochloromethane	9.75	9.35	10.0	10.0	98	94	80-125	4	18	
Chloroform	9.44	9.30	10.0	10.0	94	93	80-123	1	16	
1,1,1-Trichloroethane	9.50	9.13	10.0	10.0	95	91	80-123	4	18	
Carbon Tetrachloride	9.66	9.40	10.0	10.0	97	94	80-126	3	17	
1,1-Dichloropropene	9.16	8.91	10.0	10.0	92	89	80-126	3	18	
Benzene	9.35	9.11	10.0	10.0	94	91	80-121	3	16	
1,2-Dichloroethane	9.81	9.23	10.0	10.0	98	92	80-124	6	15	
Trichloroethene	10.2	10.0	10.0	10.0	102	100	80-122	2	18	
1,2-Dichloropropane	10.2	10.1	10.0	10.0	102	101	80-123	1	15	
Dibromomethane	10.5	10.1	10.0	10.0	105	101	80-123	4	15	
Bromodichloromethane	10.9	10.6	10.0	10.0	109	106	80-125	3	15	
(cis) 1,3-Dichloropropene	11.3	11.0	10.0	10.0	113	110	80-129	3	15	
Toluene	9.32	9.24	10.0	10.0	93	92	80-120	1	18	
(trans) 1,3-Dichloropropene	10.4	10.3	10.0	10.0	104	103	80-134	1	17	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0907W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	10.5	10.0	10.0	100	105	77-126	5	20	
Tetrachloroethene	10.7	10.9	10.0	10.0	107	109	80-124	2	18	
1,3-Dichloropropane	9.84	9.91	10.0	10.0	98	99	80-120	1	15	
Dibromochloromethane	10.6	10.9	10.0	10.0	106	109	80-128	3	15	
1,2-Dibromoethane	10.7	10.8	10.0	10.0	107	108	80-127	1	15	
Chlorobenzene	10.1	10.3	10.0	10.0	101	103	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.0	11.2	10.0	10.0	110	112	80-125	2	17	
Ethylbenzene	10.0	10.1	10.0	10.0	100	101	80-125	1	18	
m,p-Xylene	20.0	20.6	20.0	20.0	100	103	80-127	3	18	
o-Xylene	10.2	10.3	10.0	10.0	102	103	80-126	1	18	
Bromoform	11.3	11.5	10.0	10.0	113	115	80-130	2	15	
Bromobenzene	10.1	10.3	10.0	10.0	101	103	76-128	2	16	
1,1,2,2-Tetrachloroethane	10.0	10.4	10.0	10.0	100	104	74-130	4	15	
1,2,3-Trichloropropane	9.46	9.86	10.0	10.0	95	99	71-129	4	25	
2-Chlorotoluene	10.1	10.5	10.0	10.0	101	105	80-128	4	18	
4-Chlorotoluene	10.3	10.6	10.0	10.0	103	106	80-130	3	19	
1,3-Dichlorobenzene	10.0	10.5	10.0	10.0	100	105	80-126	5	17	
1,4-Dichlorobenzene	9.84	10.1	10.0	10.0	98	101	80-121	3	17	
1,2-Dichlorobenzene	9.82	10.1	10.0	10.0	98	101	79-125	3	15	
1,2-Dibromo-3-chloropropane	12.1	11.8	10.0	10.0	121	118	73-133	3	15	
1,2,4-Trichlorobenzene	10.2	10.8	10.0	10.0	102	108	80-139	6	18	
Hexachlorobutadiene	9.40	9.86	10.0	10.0	94	99	80-151	5	18	
1,2,3-Trichlorobenzene	10.6	11.3	10.0	10.0	106	113	75-146	6	28	
Surrogate:										
Dibromofluoromethane					92	90	75-127			
Toluene-d8					98	96	80-127			
4-Bromofluorobenzene					102	102	78-125			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Naphthalene	0.89	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	1.7	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	1.1	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	0.026	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	0.072	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.041	EPA 8270E/SIM	9-8-23	9-8-23	U1
Benzo(j,k)fluoranthene	ND	0.020	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.033	EPA 8270E/SIM	9-8-23	9-8-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.031	EPA 8270E/SIM	9-8-23	9-8-23	U1
Dibenz[a,h]anthracene	ND	0.036	EPA 8270E/SIM	9-8-23	9-8-23	U1
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	76	39-111				
Pyrene-d10	92	47-114				
Terphenyl-d14	77	44-121				

Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Naphthalene	0.13	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	0.062	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	0.088	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	0.0028	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	0.0062	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.0045	EPA 8270E/SIM	9-8-23	9-8-23	U1
Benzo(j,k)fluoranthene	ND	0.0021	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.013	EPA 8270E/SIM	9-8-23	9-8-23	U1
Indeno(1,2,3-c,d)pyrene	ND	0.0054	EPA 8270E/SIM	9-8-23	9-8-23	U1
Dibenz[a,h]anthracene	ND	0.0022	EPA 8270E/SIM	9-8-23	9-8-23	U1
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	71	39-111				
Pyrene-d10	79	47-114				
Terphenyl-d14	71	44-121				



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0908S2					
Naphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
2-Methylnaphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
1-Methylnaphthalene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]anthracene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Chrysene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[b]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[j,k]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Benzo[a]pyrene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
Dibenz[a,h]anthracene	ND	0.0017	EPA 8270E/SIM	9-8-23	9-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	81	47-114				
Terphenyl-d14	79	44-121				



Date of Report: September 18, 2023
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 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0908S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0624	0.0621	0.0833	0.0833	75	75	57-116	0	16	
Acenaphthylene	0.0671	0.0670	0.0833	0.0833	81	80	59-124	0	15	
Acenaphthene	0.0654	0.0656	0.0833	0.0833	79	79	59-124	0	15	
Fluorene	0.0655	0.0659	0.0833	0.0833	79	79	62-122	1	15	
Phenanthrene	0.0662	0.0662	0.0833	0.0833	79	79	62-119	0	15	
Anthracene	0.0674	0.0677	0.0833	0.0833	81	81	64-123	0	15	
Fluoranthene	0.0692	0.0701	0.0833	0.0833	83	84	63-123	1	15	
Pyrene	0.0672	0.0675	0.0833	0.0833	81	81	62-124	0	15	
Benzo[a]anthracene	0.0705	0.0709	0.0833	0.0833	85	85	59-131	1	15	
Chrysene	0.0701	0.0689	0.0833	0.0833	84	83	61-124	2	15	
Benzo[b]fluoranthene	0.0746	0.0711	0.0833	0.0833	90	85	60-126	5	15	
Benzo(j,k)fluoranthene	0.0712	0.0763	0.0833	0.0833	85	92	63-121	7	17	
Benzo[a]pyrene	0.0713	0.0712	0.0833	0.0833	86	85	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0649	0.0672	0.0833	0.0833	78	81	58-127	3	15	
Dibenz[a,h]anthracene	0.0715	0.0708	0.0833	0.0833	86	85	60-124	1	15	
Benzo[g,h,i]perylene	0.0678	0.0671	0.0833	0.0833	81	81	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					74	74	39-111			
Pyrene-d10					82	83	47-114			
Terphenyl-d14					79	79	44-121			



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Aroclor 1016	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	0.16	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	0.11	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.059	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.059	EPA 8082A	9-11-23	9-11-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 53 50-127</i>						
Client ID: NT-SS-18-5.0-082823						
Laboratory ID: 08-315-02						
Aroclor 1016	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	0.084	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.062	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.062	EPA 8082A	9-11-23	9-11-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 62 50-127</i>						



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0911S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-11-23	9-11-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0911S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.404	0.428	0.500	0.500	N/A	81	86	55-119	6	34
Surrogate:										
DCB						81	84	50-127		



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-17-5.0-082823						
Laboratory ID: 08-315-01						
Arsenic	ND	12	EPA 6010D	9-15-23	9-18-23	
Barium	34	2.9	EPA 6010D	9-15-23	9-18-23	
Cadmium	ND	0.59	EPA 6010D	9-15-23	9-18-23	
Chromium	9.3	0.59	EPA 6010D	9-15-23	9-18-23	
Copper	20	1.2	EPA 6010D	9-15-23	9-18-23	
Lead	12	5.9	EPA 6010D	9-15-23	9-18-23	
Mercury	ND	0.29	EPA 7471B	9-14-23	9-14-23	
Nickel	18	2.9	EPA 6010D	9-15-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-15-23	9-18-23	
Silver	ND	1.2	EPA 6010D	9-15-23	9-18-23	
Zinc	59	2.9	EPA 6010D	9-15-23	9-18-23	

Client ID: NT-SS-18-5.0-082823

Laboratory ID: 08-315-02

Arsenic	ND	12	EPA 6010D	9-15-23	9-18-23	
Barium	28	3.1	EPA 6010D	9-15-23	9-18-23	
Cadmium	ND	0.62	EPA 6010D	9-15-23	9-18-23	
Chromium	7.7	0.62	EPA 6010D	9-15-23	9-18-23	
Copper	17	1.2	EPA 6010D	9-15-23	9-18-23	
Lead	ND	6.2	EPA 6010D	9-15-23	9-18-23	
Mercury	ND	0.31	EPA 7471B	9-14-23	9-14-23	
Nickel	9.4	3.1	EPA 6010D	9-15-23	9-18-23	
Selenium	ND	12	EPA 6010D	9-15-23	9-18-23	
Silver	ND	1.2	EPA 6010D	9-15-23	9-18-23	
Zinc	20	3.1	EPA 6010D	9-15-23	9-18-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0915SM1					
Arsenic	ND	10	EPA 6010D	9-15-23	9-15-23	
Barium	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Cadmium	ND	0.50	EPA 6010D	9-15-23	9-15-23	
Chromium	ND	0.50	EPA 6010D	9-15-23	9-15-23	
Copper	ND	1.0	EPA 6010D	9-15-23	9-15-23	
Lead	ND	5.0	EPA 6010D	9-15-23	9-15-23	
Nickel	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Selenium	ND	10	EPA 6010D	9-15-23	9-15-23	
Silver	ND	1.0	EPA 6010D	9-15-23	9-15-23	
Zinc	ND	2.5	EPA 6010D	9-15-23	9-15-23	
Laboratory ID:	MB0914S1					
Mercury	ND	0.25	EPA 7471B	9-14-23	9-14-23	



Date of Report: September 18, 2023
 Samples Submitted: August 29, 2023
 Laboratory Reference: 2308-315B
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-098-01							
	ORIG	DUP						
Arsenic	10.1	13.0	NA	NA	NA	NA	25	20 C
Barium	63.1	55.3	NA	NA	NA	NA	13	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	58.4	57.2	NA	NA	NA	NA	2	20
Copper	21.8	18.9	NA	NA	NA	NA	14	20
Lead	79.2	82.5	NA	NA	NA	NA	4	20
Nickel	283	241	NA	NA	NA	NA	16	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	166	164	NA	NA	NA	NA	2	20

Laboratory ID:	09-034-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-098-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	95.9	96.7	100	100	10.1	86	87	75-125	1	20
Barium	143	141	100	100	63.1	80	78	75-125	1	20
Cadmium	41.0	40.3	50.0	50.0	ND	82	81	75-125	2	20
Chromium	135	133	100	100	58.4	77	75	75-125	1	20
Copper	63.3	66.8	50.0	50.0	21.8	83	90	75-125	5	20
Lead	293	284	250	250	79.2	86	82	75-125	3	20
Nickel	313	314	100	100	283	30	31	75-125	0	20 V
Selenium	82.9	82.6	100	100	ND	83	83	75-125	0	20
Silver	21.8	21.3	25.0	25.0	ND	87	85	75-125	2	20
Zinc	243	269	100	100	166	76	103	75-125	10	20

Laboratory ID:	09-034-01									
Mercury	0.494	0.488	0.500	0.500	0.0158	96	94	80-120	1	20



Date of Report: September 18, 2023
Samples Submitted: August 29, 2023
Laboratory Reference: 2308-315B
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-17-5.0-082823	08-315-01	15	8-31-23
NT-SS-18-5.0-082823	08-315-02	19	8-31-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Environmental Inc.

Analytical Laboratory Testing Services
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Chain of Custody

Page 1 of 1

Company: DH Environmental		Turnaround Request (in working days)		Laboratory Number: 08-315	
Project Number:		(Check One)			
Project Name: Star Forge UT Site Assessment		☐ Same Day ☐ 1 Day			
Project Manager:		☐ 2 Days ☐ 3 Days			
Sampled by: N. Moxley		☐ Standard (7 Days)			
N. Moxley		☒ 5 Days (other)			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	NT-SS-17-5.0-082823	8/28/23	1200	Soil	5
2	NT-SS-18-5.0-082823		1330		
3	NT-SS-19-5.0-082823		1340		
4	NT-SS-16-5.0-082823		1415		
5	NT-SS-15-5.0-082823		1425		
6	Trip Blank			W	3
Signature		Company	Date	Time	Comments/Special Instructions
		DHE	8/28/23	1800	Please report to lowest possible limit, but please be advised of potentially elevated petroleum concentrations
Relinquished		OSE	8/29/23	0830	* EDB, EDC, MTBE, BTEX, HVOCS Added 9/17/23. DB (STA)
Received					Data Package: Standard ☒ Level III ☐ Level IV ☐
Relinquished					Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐
Received					
Relinquished					
Reviewed/Date					



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 8, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-357

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 8, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 30, 2023 and received by the laboratory on August 31, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-20-5.0-083023						
Laboratory ID:	08-357-01					
Gasoline	ND	5.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				
Client ID: NT-SS-21-5.0-083023						
Laboratory ID:	08-357-02					
Gasoline	ND	5.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	65-126				
Client ID: NT-SS-22-5.0-083023						
Laboratory ID:	08-357-03					
Gasoline	ND	5.3	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	96	65-126				
Client ID: NT-SS-23-5.0-083023						
Laboratory ID:	08-357-04					
Gasoline	ND	6.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-14-5.0-083023						
Laboratory ID:	08-357-05					
Gasoline Range Organics	450	5.0	NWTPH-Gx	9-1-23	9-1-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				
Client ID: NT-SS-13-5.0-083023						
Laboratory ID:	08-357-06					
Gasoline Range Organics	100	4.3	NWTPH-Gx	9-1-23	9-1-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	65-126				
Client ID: NT-SS-12-5.0-083023						
Laboratory ID:	08-357-07					
Gasoline	ND	5.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-11-5.0-083023						
Laboratory ID:	08-357-08					
Gasoline	ND	7.2	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: NT-SS-28-6.5-083023						
Laboratory ID:	08-357-09					
Gasoline	ND	5.3	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				
Client ID: NT-SS-27-6.5-083023						
Laboratory ID:	08-357-10					
Gasoline	ND	7.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				
Client ID: NT-SS-26-6.5-083023						
Laboratory ID:	08-357-11					
Gasoline	ND	4.9	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				
Client ID: ST-SS-3-8.5-083023						
Laboratory ID:	08-357-12					
Gasoline	ND	56	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				
Client ID: ST-SS-4-8.5-083023						
Laboratory ID:	08-357-13					
Gasoline	ND	5.8	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	65-126				
Client ID: ST-SS-5-8.5-083023						
Laboratory ID:	08-357-14					
Gasoline	ND	120	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	70	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID:	08-357-15					
Gasoline	ND	280	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	97	65-126				
Client ID: ST-SS-16-6.5-083023						
Laboratory ID:	08-357-16					
Gasoline	ND	230	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: ST-SS-17-6.5-083023						
Laboratory ID:	08-357-17					
Gasoline	ND	170	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	78	65-126				
Client ID: ST-SS-18-6.5-083023						
Laboratory ID:	08-357-18					
Gasoline	ND	78	NWTPH-Gx	9-1-23	9-1-23	U1
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID: ST-SS-19-6.5-083023						
Laboratory ID:	08-357-19					
Gasoline	ND	4.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID: ST-SS-9-6.5-083023						
Laboratory ID:	08-357-20					
Gasoline	ND	5.7	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	65-126				
Client ID: ST-SS-10-6.5-083023						
Laboratory ID:	08-357-21					
Gasoline	ND	7.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-11-6.5-083023						
Laboratory ID:	08-357-22					
Gasoline	ND	7.1	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-126				
Client ID: ST-SS-12-6.5-083023						
Laboratory ID:	08-357-23					
Gasoline	ND	6.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				
Client ID: ST-SS-13-6.5-083023						
Laboratory ID:	08-357-24					
Gasoline	ND	8.6	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	65-126				
Client ID: ST-SS-14-6.5-083023						
Laboratory ID:	08-357-25					
Gasoline	ND	6.8	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-126				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0901S1					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Laboratory ID:	MB0901S2					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Laboratory ID:	MB0901S3					
Gasoline	ND	5.0	NWTPH-Gx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	65-126				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-357-01										
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						92	98	65-126			
Laboratory ID:	08-357-02										
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						94	93	65-126			
Laboratory ID:	08-357-03										
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						96	97	65-126			



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
Gasoline	ND	100	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	65-122				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905W1					
Gasoline	ND	100	NWTPH-Gx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-353-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				90	86	65-122		



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-20-5.0-083023					
Laboratory ID:	08-357-01					
Diesel Fuel #2	96	28	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-1-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	117	50-150				

Client ID:	NT-SS-21-5.0-083023					
Laboratory ID:	08-357-02					
Diesel Range Organics	ND	30	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	59	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	106	50-150				

Client ID:	NT-SS-22-5.0-083023					
Laboratory ID:	08-357-03					
Diesel Range Organics	ND	30	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	59	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	108	50-150				

Client ID:	NT-SS-23-5.0-083023					
Laboratory ID:	08-357-04					
Diesel Range Organics	ND	33	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	65	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	107	50-150				

Client ID:	NT-SS-14-5.0-083023					
Laboratory ID:	08-357-05					
Diesel Fuel #2	4900	690	NWTPH-Dx	9-1-23	9-6-23	N
Lube Oil	33000	1400	NWTPH-Dx	9-1-23	9-6-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	NT-SS-13-5.0-083023					
Laboratory ID:	08-357-06					
Diesel Fuel #2	4900	1300	NWTPH-Dx	9-1-23	9-6-23	N
Lube Oil	47000	2700	NWTPH-Dx	9-1-23	9-6-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	NT-SS-12-5.0-083023					
Laboratory ID:	08-357-07					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	100	50-150				

Client ID: NT-SS-11-5.0-083023

Laboratory ID:	08-357-08					
Diesel Range Organics	ND	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	69	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	107	50-150				

Client ID: NT-SS-28-6.5-083023

Laboratory ID:	08-357-09					
Diesel Range Organics	ND	29	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	58	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	100	50-150				

Client ID: NT-SS-27-6.5-083023

Laboratory ID:	08-357-10					
Diesel Range Organics	ND	32	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil	120	63	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	125	50-150				

Client ID: NT-SS-26-6.5-083023

Laboratory ID:	08-357-11					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	130	50-150				

Client ID: ST-SS-3-8.5-083023

Laboratory ID:	08-357-12					
Diesel Fuel #2	330	32	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	64	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o-Terphenyl</i>	100	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-4-8.5-083023					
Laboratory ID:	08-357-13					
Diesel Fuel #2	130	31	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	62	NWTPH-Dx	9-1-23	9-2-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	114	50-150				

Client ID:	ST-SS-5-8.5-083023					
Laboratory ID:	08-357-14					
Diesel Fuel #2	430	29	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	57	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	124	50-150				

Client ID:	ST-SS-15-6.5-083023					
Laboratory ID:	08-357-15					
Diesel Fuel #2	15000	130	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	740	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	146	50-150				

Client ID:	ST-SS-16-6.5-083023					
Laboratory ID:	08-357-16					
Diesel Fuel #2	6000	130	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	710	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	134	50-150				

Client ID:	ST-SS-17-6.5-083023					
Laboratory ID:	08-357-17					
Diesel Fuel #2	18000	270	NWTPH-Dx	9-1-23	9-6-23	
Lube Oil Range Organics	ND	1100	NWTPH-Dx	9-1-23	9-6-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S

Client ID:	ST-SS-18-6.5-083023					
Laboratory ID:	08-357-18					
Diesel Fuel #2	2900	27	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	190	NWTPH-Dx	9-1-23	9-2-23	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	140	50-150				



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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-19-6.5-083023					
Laboratory ID:	08-357-19					
Diesel Range Organics	ND	28	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	ST-SS- 9-6.5-083023					
Laboratory ID:	08-357-20					
Diesel Range Organics	ND	33	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	66	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	ST-SS-10-6.5-083023					
Laboratory ID:	08-357-21					
Diesel Range Organics	ND	36	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	73	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	ST-SS-11-6.5-083023					
Laboratory ID:	08-357-22					
Diesel Range Organics	38	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	70	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

Client ID:	ST-SS-12-6.5-083023					
Laboratory ID:	08-357-23					
Diesel Range Organics	ND	32	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	63	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

Client ID:	ST-SS-13-6.5-083023					
Laboratory ID:	08-357-24					
Diesel Range Organics	ND	40	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	80	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-SS-14-6.5-083023					
Laboratory ID:	08-357-25					
Diesel Range Organics	ND	35	NWTPH-Dx	9-1-23	9-2-23	
Lube Oil Range Organics	ND	69	NWTPH-Dx	9-1-23	9-2-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0901S2					
Diesel Range Organics	ND	25	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	98	50-150				
Laboratory ID:	MB0901S3					
Diesel Range Organics	ND	25	NWTPH-Dx	9-1-23	9-1-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-1-23	9-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	08-357-01									
	ORIG	DUP								
Diesel Fuel #2	84.6	59.5	NA	NA		NA	NA	35	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						117	101	50-150		
Laboratory ID:	08-357-02									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						106	108	50-150		
Laboratory ID:	08-357-21									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	40	
Surrogate:										
o-Terphenyl						58	87	50-150		



Date of Report: September 8, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357
 Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-20-5.0-083023	08-357-01	11	9-5-23
NT-SS-21-5.0-083023	08-357-02	15	9-5-23
NT-SS-22-5.0-083023	08-357-03	16	9-5-23
NT-SS-23-5.0-083023	08-357-04	24	9-5-23
NT-SS-14-5.0-083023	08-357-05	9	9-5-23
NT-SS-13-5.0-083023	08-357-06	7	9-5-23
NT-SS-12-5.0-083023	08-357-07	10	9-5-23
NT-SS-11-5.0-083023	08-357-08	28	9-5-23
NT-SS-28-6.5-083023	08-357-09	13	9-5-23
NT-SS-27-6.5-083023	08-357-10	21	9-5-23
NT-SS-26-6.5-083023	08-357-11	10	9-5-23
ST-SS-3-8.5-083023	08-357-12	22	9-5-23
ST-SS-4-8.5-083023	08-357-13	19	9-5-23
ST-SS-5-8.5-083023	08-357-14	12	9-5-23
ST-SS-15-6.5-083023	08-357-15	6	9-5-23
ST-SS-16-6.5-083023	08-357-16	6	9-5-23
ST-SS-17-6.5-083023	08-357-17	6	9-5-23
ST-SS-18-6.5-083023	08-357-18	6	9-5-23
ST-SS-19-6.5-083023	08-357-19	11	9-5-23
ST-SS- 9-6.5-083023	08-357-20	24	9-5-23
ST-SS-10-6.5-083023	08-357-21	31	9-5-23
ST-SS-11-6.5-083023	08-357-22	28	9-5-23
ST-SS-12-6.5-083023	08-357-23	21	9-5-23
ST-SS-13-6.5-083023	08-357-24	37	9-5-23
ST-SS-14-6.5-083023	08-357-25	27	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Chain of Custody

Page 1 of 3

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com									
Company: <u>DH Environmental</u>									
Project Number: _____									
Project Name: <u>Torgensen UST Site Assessment</u>									
Project Manager: <u>N. Moxley</u>									
Sampled by: <u>N. Moxley</u>									
Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)									
Date Sampled: <u>8/30/23</u> Time Sampled: <u>10:15</u> Matrix: <u>5:1</u>									
Number of Containers									
NWTPH-HCID									
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐									
NWTPH-Gx									
NWTPH-Dx (SG Clean-up ☐)									
Volatiles 8260									
Halogenated Volatiles 8260									
EDB EPA 8011 (Waters Only)									
Semivolatiles 8270/SIM (with low-level PAHs)									
PAHs 8270/SIM (low-level)									
PCBs 8082									
Organochlorine Pesticides 8081									
Organophosphorus Pesticides 8270/SIM									
Chlorinated Acid Herbicides 8151									
Total RCRA Metals									
Total MTCA Metals									
TCLP Metals									
HEM (oil and grease) 1664									
% Moisture									
Lab ID									
Sample Identification									
1 NT-SS-20-5.0-083023									
2 NT-SS-21-5.0-083023									
3 NT-SS-22-5.0-083023									
4 NT-SS-23-5.0-083023									
5 NT-SS-14-5.0-083023									
6 NT-SS-13-5.0-083023									
7 NT-SS-12-5.0-083023									
8 NT-SS-11-5.0-083023									
9 NT-SS-28-6.5-083023									
10 NT-SS-27-6.5-083023									
Signature: _____									
Company: <u>DHE</u>									
Date: <u>8-31-23</u> Time: <u>12:10</u>									
Comments/Special Instructions: <u>- please report lowest possible reporting limits</u> <u>- samples may have elevated petroleum concentrations</u>									
Data Package: Standard ☒ Level III ☐ Level IV ☐									
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐									
Reviewed/Date: _____									



**OnSite
Environmental Inc.**

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Chain of Custody

Page 2 of 3

Company: OnSite Environmental		Turnaround Request (in working days)		Laboratory Number: 08-357													
Project Number:		(Check One)															
Project Name: Tanagers UST Site Assessment		☐ Same Day ☐ 1 Day															
Project Manager: N. Moxley		☐ 2 Days ☐ 3 Days															
Sampled by: N. Moxley		☐ Standard (7 Days)															
Sampled by: N. Moxley		☒ 5-day (other)															
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers												
11	NT-SS-26-6.5-083023	8/30/23	0930	Soil	5												
12	ST-SS-3-8.5-083023		1220														
13	ST-SS-4-8.5-083023		1225														
14	ST-SS-5-8.5-083023		1235														
15	ST-SS-15-6.5-083023		1250														
16	ST-SS-16-6.5-083023		1300														
17	ST-SS-17-6.5-083023		1310														
18	ST-SS-18-6.5-083023		1320														
19	ST-SS-19-6.5-083023		1330														
20	ST-SS-9-6.5-083023		1210														
Signature		Company	Date	Time	Comments/Special Instructions												
Relinquished		OnSite	8-31-23	1214													
Received		OnSite	8/31/23	1214													
Relinquished																	
Received																	
Relinquished																	
Received																	
Relinquished																	
Received																	
Relinquished																	
Reviewed/Date		Reviewed/Date		Data Package: Standard ☒ Level III ☐ Level IV ☐									Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐				



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September 22, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen UST Site Assessment
Laboratory Reference No. 2308-357B

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 22, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357B
Project: Jorgensen UST Site Assessment

Case Narrative

Samples were collected on August 30, 2023 and received by the laboratory on August 31, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

Some MTCA Method A cleanup levels are not achievable for samples ST-SS-15-6.5-083023 and ST-SS-17-6.5-083023 due to the necessary dilution of these samples.

PAHs EPA 8270E/SIM Analysis

Sample ST-SS-15-6.5-083023 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

PCBs EPA 8082A Analysis

Sample matrix effects caused the percent recovery for the surrogate DCB in the sample NT-SS-13-5.0-083023 (49%) to be below the quality control limits of 50-127%. All other QC associated with this sample batch was within limits. No further action was undertaken.

Total Metals EPA 6010D/7471B Analysis

The Matrix Spike/ Matrix Spike Duplicate recoveries for Chromium and Nickel are outside control limits due to matrix inhomogeneity. The Spike Blank recovery was 108% for Chromium and 111% for Nickel.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	9-13-23	9-13-23	
Chloromethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Vinyl Chloride	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromomethane	ND	0.0058	EPA 8260D	9-13-23	9-13-23	
Chloroethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Trichlorofluoromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Iodomethane	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Methylene Chloride	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
2,2-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromochloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Chloroform	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Carbon Tetrachloride	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Benzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Trichloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Dibromomethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromodichloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Toluene	ND	0.0046	EPA 8260D	9-13-23	9-13-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,2-Trichloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Tetrachloroethene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,3-Dichloropropane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Dibromochloromethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromoethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Chlorobenzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
Ethylbenzene	ND	0.00092	EPA 8260D	9-13-23	9-13-23	
m,p-Xylene	0.0094	0.0018	EPA 8260D	9-13-23	9-13-23	
o-Xylene	0.0069	0.00092	EPA 8260D	9-13-23	9-13-23	
Bromoform	ND	0.0046	EPA 8260D	9-13-23	9-13-23	
Bromobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.043	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.21	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>76</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Dichlorodifluoromethane	ND	0.060	EPA 8260D	9-12-23	9-13-23	
Chloromethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Vinyl Chloride	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromomethane	ND	0.27	EPA 8260D	9-12-23	9-13-23	
Chloroethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Trichlorofluoromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Iodomethane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Methylene Chloride	ND	0.21	EPA 8260D	9-12-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Methyl t-Butyl Ether	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2,2-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromochloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Chloroform	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,1-Trichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Carbon Tetrachloride	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Benzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Trichloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Dibromomethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Bromodichloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.21	EPA 8260D	9-12-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Toluene	ND	0.21	EPA 8260D	9-12-23	9-13-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
(trans) 1,3-Dichloropropene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,2-Trichloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Tetrachloroethene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,3-Dichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Dibromochloromethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromoethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Chlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Ethylbenzene	0.085	0.043	EPA 8260D	9-12-23	9-13-23	
m,p-Xylene	0.48	0.085	EPA 8260D	9-12-23	9-13-23	
o-Xylene	0.25	0.043	EPA 8260D	9-12-23	9-13-23	
Bromoform	ND	0.21	EPA 8260D	9-12-23	9-13-23	
Bromobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichloropropane	ND	0.043	EPA 8260D	9-12-23	9-13-23	
2-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
4-Chlorotoluene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,3-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,4-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.21	EPA 8260D	9-12-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
Hexachlorobutadiene	ND	0.21	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.043	EPA 8260D	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Dichlorodifluoromethane	ND	0.061	EPA 8260D	9-12-23	9-13-23	
Chloromethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Vinyl Chloride	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromomethane	ND	0.28	EPA 8260D	9-12-23	9-13-23	
Chloroethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Trichlorofluoromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Iodomethane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Methylene Chloride	ND	0.22	EPA 8260D	9-12-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Methyl t-Butyl Ether	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2,2-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromochloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Chloroform	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,1-Trichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Carbon Tetrachloride	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Benzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Trichloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Dibromomethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromodichloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.22	EPA 8260D	9-12-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Toluene	ND	0.22	EPA 8260D	9-12-23	9-13-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
(trans) 1,3-Dichloropropene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,2-Trichloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Tetrachloroethene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,3-Dichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Dibromochloromethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromoethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Chlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Ethylbenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
m,p-Xylene	ND	0.087	EPA 8260D	9-12-23	9-13-23	
o-Xylene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Bromoform	ND	0.22	EPA 8260D	9-12-23	9-13-23	
Bromobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichloropropane	ND	0.044	EPA 8260D	9-12-23	9-13-23	
2-Chlorotoluene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
4-Chlorotoluene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,3-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,4-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.22	EPA 8260D	9-12-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Hexachlorobutadiene	ND	0.22	EPA 8260D	9-12-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.044	EPA 8260D	9-12-23	9-13-23	
Surrogate: Percent Recovery Control Limits						
Dibromofluoromethane	92	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	102	71-130				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.011	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0050	EPA 8260D	9-12-23	9-12-23	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-13-23	9-13-23	
Chloromethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Vinyl Chloride	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromomethane	ND	0.0063	EPA 8260D	9-13-23	9-13-23	
Chloroethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Iodomethane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Chloroform	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Benzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Trichloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Toluene	ND	0.0050	EPA 8260D	9-13-23	9-13-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Chlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Ethylbenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-13-23	9-13-23	
o-Xylene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Bromoform	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	9-13-23	9-13-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-13-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0426	0.0385	0.0500	0.0500	85	77	30-160	10	26	
Chloromethane	0.0460	0.0428	0.0500	0.0500	92	86	59-131	7	26	
Vinyl Chloride	0.0492	0.0468	0.0500	0.0500	98	94	68-136	5	23	
Bromomethane	0.0486	0.0456	0.0500	0.0500	97	91	48-155	6	32	
Chloroethane	0.0511	0.0482	0.0500	0.0500	102	96	67-141	6	16	
Trichlorofluoromethane	0.0507	0.0481	0.0500	0.0500	101	96	76-127	5	19	
1,1-Dichloroethene	0.0545	0.0501	0.0500	0.0500	109	100	75-129	8	19	
Iodomethane	0.0411	0.0417	0.0500	0.0500	82	83	37-140	1	27	
Methylene Chloride	0.0462	0.0446	0.0500	0.0500	92	89	60-124	4	18	
(trans) 1,2-Dichloroethene	0.0513	0.0496	0.0500	0.0500	103	99	79-133	3	15	
Methyl t-Butyl Ether	0.0504	0.0488	0.0500	0.0500	101	98	73-125	3	17	
1,1-Dichloroethane	0.0515	0.0497	0.0500	0.0500	103	99	79-125	4	17	
2,2-Dichloropropane	0.0531	0.0529	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0538	0.0518	0.0500	0.0500	108	104	75-131	4	15	
Bromochloromethane	0.0499	0.0491	0.0500	0.0500	100	98	80-126	2	15	
Chloroform	0.0530	0.0513	0.0500	0.0500	106	103	80-123	3	15	
1,1,1-Trichloroethane	0.0523	0.0506	0.0500	0.0500	105	101	78-124	3	21	
Carbon Tetrachloride	0.0520	0.0484	0.0500	0.0500	104	97	74-127	7	18	
1,1-Dichloropropene	0.0520	0.0483	0.0500	0.0500	104	97	80-123	7	15	
Benzene	0.0517	0.0501	0.0500	0.0500	103	100	80-122	3	18	
1,2-Dichloroethane	0.0518	0.0510	0.0500	0.0500	104	102	75-124	2	15	
Trichloroethene	0.0570	0.0529	0.0500	0.0500	114	106	80-129	7	18	
1,2-Dichloropropane	0.0538	0.0538	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0532	0.0529	0.0500	0.0500	106	106	80-123	1	15	
Bromodichloromethane	0.0561	0.0546	0.0500	0.0500	112	109	80-129	3	15	
(cis) 1,3-Dichloropropene	0.0577	0.0564	0.0500	0.0500	115	113	80-130	2	15	
Toluene	0.0532	0.0511	0.0500	0.0500	106	102	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0573	0.0564	0.0500	0.0500	115	113	80-124	2	15	



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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0528	0.0520	0.0500	0.0500	106	104	80-120	2	15	
Tetrachloroethene	0.0587	0.0556	0.0500	0.0500	117	111	77-126	5	15	
1,3-Dichloropropane	0.0535	0.0522	0.0500	0.0500	107	104	77-123	2	15	
Dibromochloromethane	0.0577	0.0567	0.0500	0.0500	115	113	80-128	2	16	
1,2-Dibromoethane	0.0534	0.0531	0.0500	0.0500	107	106	80-122	1	20	
Chlorobenzene	0.0569	0.0548	0.0500	0.0500	114	110	80-120	4	18	
1,1,1,2-Tetrachloroethane	0.0582	0.0554	0.0500	0.0500	116	111	80-120	5	15	
Ethylbenzene	0.0555	0.0531	0.0500	0.0500	111	106	80-120	4	15	
m,p-Xylene	0.116	0.111	0.100	0.100	116	111	80-120	4	15	
o-Xylene	0.0562	0.0546	0.0500	0.0500	112	109	80-120	3	15	
Bromoform	0.0561	0.0554	0.0500	0.0500	112	111	78-126	1	15	
Bromobenzene	0.0559	0.0535	0.0500	0.0500	112	107	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0528	0.0529	0.0500	0.0500	106	106	75-122	0	17	
1,2,3-Trichloropropane	0.0504	0.0508	0.0500	0.0500	101	102	72-125	1	20	
2-Chlorotoluene	0.0589	0.0570	0.0500	0.0500	118	114	75-128	3	15	
4-Chlorotoluene	0.0582	0.0558	0.0500	0.0500	116	112	78-127	4	16	
1,3-Dichlorobenzene	0.0581	0.0559	0.0500	0.0500	116	112	78-123	4	17	
1,4-Dichlorobenzene	0.0592	0.0563	0.0500	0.0500	118	113	77-121	5	17	
1,2-Dichlorobenzene	0.0562	0.0542	0.0500	0.0500	112	108	80-120	4	15	
1,2-Dibromo-3-chloropropane	0.0521	0.0520	0.0500	0.0500	104	104	61-137	0	28	
1,2,4-Trichlorobenzene	0.0606	0.0576	0.0500	0.0500	121	115	77-127	5	17	
Hexachlorobutadiene	0.0596	0.0562	0.0500	0.0500	119	112	77-125	6	22	
1,2,3-Trichlorobenzene	0.0598	0.0572	0.0500	0.0500	120	114	77-124	4	19	
Surrogate:										
Dibromofluoromethane					95	92	75-130			
Toluene-d8					98	99	78-128			
4-Bromofluorobenzene					99	99	71-130			



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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent	Recovery	RPD		Limit	Flags
					Recovery	Limits				
SPIKE BLANKS										
Laboratory ID:	SB0913S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0357	0.0328	0.0500	0.0500	71	66	30-160	8	26	
Chloromethane	0.0403	0.0370	0.0500	0.0500	81	74	59-131	9	26	
Vinyl Chloride	0.0450	0.0430	0.0500	0.0500	90	86	68-136	5	23	
Bromomethane	0.0395	0.0407	0.0500	0.0500	79	81	48-155	3	32	
Chloroethane	0.0472	0.0427	0.0500	0.0500	94	85	67-141	10	16	
Trichlorofluoromethane	0.0472	0.0454	0.0500	0.0500	94	91	76-127	4	19	
1,1-Dichloroethene	0.0496	0.0485	0.0500	0.0500	99	97	75-129	2	19	
Iodomethane	0.0442	0.0422	0.0500	0.0500	88	84	37-140	5	27	
Methylene Chloride	0.0439	0.0452	0.0500	0.0500	88	90	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0487	0.0473	0.0500	0.0500	97	95	79-133	3	15	
Methyl t-Butyl Ether	0.0512	0.0507	0.0500	0.0500	102	101	73-125	1	17	
1,1-Dichloroethane	0.0506	0.0483	0.0500	0.0500	101	97	79-125	5	17	
2,2-Dichloropropane	0.0510	0.0493	0.0500	0.0500	102	99	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0509	0.0488	0.0500	0.0500	102	98	75-131	4	15	
Bromochloromethane	0.0510	0.0507	0.0500	0.0500	102	101	80-126	1	15	
Chloroform	0.0497	0.0505	0.0500	0.0500	99	101	80-123	2	15	
1,1,1-Trichloroethane	0.0505	0.0490	0.0500	0.0500	101	98	78-124	3	21	
Carbon Tetrachloride	0.0496	0.0482	0.0500	0.0500	99	96	74-127	3	18	
1,1-Dichloropropene	0.0487	0.0477	0.0500	0.0500	97	95	80-123	2	15	
Benzene	0.0494	0.0489	0.0500	0.0500	99	98	80-122	1	18	
1,2-Dichloroethane	0.0522	0.0525	0.0500	0.0500	104	105	75-124	1	15	
Trichloroethene	0.0521	0.0535	0.0500	0.0500	104	107	80-129	3	18	
1,2-Dichloropropane	0.0538	0.0526	0.0500	0.0500	108	105	80-123	2	15	
Dibromomethane	0.0556	0.0566	0.0500	0.0500	111	113	80-123	2	15	
Bromodichloromethane	0.0558	0.0540	0.0500	0.0500	112	108	80-129	3	15	
(cis) 1,3-Dichloropropene	0.0584	0.0570	0.0500	0.0500	117	114	80-130	2	15	
Toluene	0.0525	0.0507	0.0500	0.0500	105	101	80-120	3	18	
(trans) 1,3-Dichloropropene	0.0575	0.0572	0.0500	0.0500	115	114	80-124	1	15	



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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0913S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0542	0.0540	0.0500	0.0500	108	108	80-120	0	15	
Tetrachloroethene	0.0547	0.0531	0.0500	0.0500	109	106	77-126	3	15	
1,3-Dichloropropane	0.0549	0.0537	0.0500	0.0500	110	107	77-123	2	15	
Dibromochloromethane	0.0583	0.0588	0.0500	0.0500	117	118	80-128	1	16	
1,2-Dibromoethane	0.0566	0.0562	0.0500	0.0500	113	112	80-122	1	20	
Chlorobenzene	0.0552	0.0536	0.0500	0.0500	110	107	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0575	0.0555	0.0500	0.0500	115	111	80-120	4	15	
Ethylbenzene	0.0533	0.0522	0.0500	0.0500	107	104	80-120	2	15	
m,p-Xylene	0.112	0.108	0.100	0.100	112	108	80-120	4	15	
o-Xylene	0.0553	0.0533	0.0500	0.0500	111	107	80-120	4	15	
Bromoform	0.0609	0.0607	0.0500	0.0500	122	121	78-126	0	15	
Bromobenzene	0.0526	0.0525	0.0500	0.0500	105	105	79-124	0	15	
1,1,2,2-Tetrachloroethane	0.0555	0.0561	0.0500	0.0500	111	112	75-122	1	17	
1,2,3-Trichloropropane	0.0540	0.0558	0.0500	0.0500	108	112	72-125	3	20	
2-Chlorotoluene	0.0556	0.0528	0.0500	0.0500	111	106	75-128	5	15	
4-Chlorotoluene	0.0541	0.0526	0.0500	0.0500	108	105	78-127	3	16	
1,3-Dichlorobenzene	0.0549	0.0546	0.0500	0.0500	110	109	78-123	1	17	
1,4-Dichlorobenzene	0.0554	0.0550	0.0500	0.0500	111	110	77-121	1	17	
1,2-Dichlorobenzene	0.0548	0.0550	0.0500	0.0500	110	110	80-120	0	15	
1,2-Dibromo-3-chloropropane	0.0580	0.0634	0.0500	0.0500	116	127	61-137	9	28	
1,2,4-Trichlorobenzene	0.0565	0.0572	0.0500	0.0500	113	114	77-127	1	17	
Hexachlorobutadiene	0.0570	0.0550	0.0500	0.0500	114	110	77-125	4	22	
1,2,3-Trichlorobenzene	0.0580	0.0584	0.0500	0.0500	116	117	77-124	1	19	
Surrogate:										
Dibromofluoromethane					92	95	75-130			
Toluene-d8					100	97	78-128			
4-Bromofluorobenzene					102	104	71-130			



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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	1.4	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	9.6	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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 Project: Jorgensen UST Site Assessment

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Trip blank					
Laboratory ID:	08-357-26					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>81</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	1.4	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	9.6	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	9-12-23	9-12-23	



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	1.0	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	81	75-127				
Toluene-d8	91	80-127				
4-Bromofluorobenzene	100	78-125				



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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent	Recovery		RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0912W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	8.42	7.07	10.0	10.0	84	71	34-166	17	21	
Chloromethane	9.40	8.82	10.0	10.0	94	88	63-138	6	18	
Vinyl Chloride	9.79	9.16	10.0	10.0	98	92	71-135	7	20	
Bromomethane	7.36	8.87	10.0	10.0	74	89	20-151	19	36	
Chloroethane	9.56	9.51	10.0	10.0	96	95	76-125	1	20	
Trichlorofluoromethane	9.07	8.84	10.0	10.0	91	88	75-131	3	19	
1,1-Dichloroethene	9.61	9.42	10.0	10.0	96	94	78-125	2	19	
Iodomethane	5.23	6.91	10.0	10.0	52	69	10-155	28	40	
Methylene Chloride	8.70	8.64	10.0	10.0	87	86	80-120	1	15	
(trans) 1,2-Dichloroethene	9.68	9.76	10.0	10.0	97	98	80-125	1	17	
Methyl t-Butyl Ether	8.85	9.03	10.0	10.0	89	90	80-122	2	15	
1,1-Dichloroethane	9.69	9.57	10.0	10.0	97	96	80-125	1	17	
2,2-Dichloropropane	10.9	10.9	10.0	10.0	109	109	80-146	0	21	
(cis) 1,2-Dichloroethene	9.79	9.89	10.0	10.0	98	99	80-129	1	17	
Bromochloromethane	9.60	9.61	10.0	10.0	96	96	80-125	0	18	
Chloroform	9.60	9.57	10.0	10.0	96	96	80-123	0	16	
1,1,1-Trichloroethane	9.23	9.18	10.0	10.0	92	92	80-123	1	18	
Carbon Tetrachloride	9.45	9.48	10.0	10.0	95	95	80-126	0	17	
1,1-Dichloropropene	8.93	9.29	10.0	10.0	89	93	80-126	4	18	
Benzene	9.59	9.38	10.0	10.0	96	94	80-121	2	16	
1,2-Dichloroethane	9.86	9.90	10.0	10.0	99	99	80-124	0	15	
Trichloroethene	9.88	9.71	10.0	10.0	99	97	80-122	2	18	
1,2-Dichloropropane	10.3	10.0	10.0	10.0	103	100	80-123	3	15	
Dibromomethane	10.0	9.66	10.0	10.0	100	97	80-123	3	15	
Bromodichloromethane	10.6	10.4	10.0	10.0	106	104	80-125	2	15	
(cis) 1,3-Dichloropropene	11.0	10.8	10.0	10.0	110	108	80-129	2	15	
Toluene	9.45	8.92	10.0	10.0	95	89	80-120	6	18	
(trans) 1,3-Dichloropropene	9.36	9.74	10.0	10.0	94	97	80-134	4	17	



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QUALITY CONTROL

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.63	9.92	10.0	10.0	96	99	77-126	3	20	
Tetrachloroethene	10.4	10.3	10.0	10.0	104	103	80-124	1	18	
1,3-Dichloropropane	9.40	9.71	10.0	10.0	94	97	80-120	3	15	
Dibromochloromethane	10.4	10.4	10.0	10.0	104	104	80-128	0	15	
1,2-Dibromoethane	9.83	10.2	10.0	10.0	98	102	80-127	4	15	
Chlorobenzene	9.82	9.64	10.0	10.0	98	96	80-120	2	17	
1,1,1,2-Tetrachloroethane	10.5	10.5	10.0	10.0	105	105	80-125	0	17	
Ethylbenzene	9.71	9.89	10.0	10.0	97	99	80-125	2	18	
m,p-Xylene	19.6	19.5	20.0	20.0	98	98	80-127	1	18	
o-Xylene	9.93	9.74	10.0	10.0	99	97	80-126	2	18	
Bromoform	10.6	10.6	10.0	10.0	106	106	80-130	0	15	
Bromobenzene	9.63	9.53	10.0	10.0	96	95	76-128	1	16	
1,1,2,2-Tetrachloroethane	9.81	9.78	10.0	10.0	98	98	74-130	0	15	
1,2,3-Trichloropropane	9.61	9.21	10.0	10.0	96	92	71-129	4	25	
2-Chlorotoluene	10.2	9.78	10.0	10.0	102	98	80-128	4	18	
4-Chlorotoluene	10.0	9.55	10.0	10.0	100	96	80-130	5	19	
1,3-Dichlorobenzene	9.79	9.57	10.0	10.0	98	96	80-126	2	17	
1,4-Dichlorobenzene	9.55	9.25	10.0	10.0	96	93	80-121	3	17	
1,2-Dichlorobenzene	9.65	9.31	10.0	10.0	97	93	79-125	4	15	
1,2-Dibromo-3-chloropropane	10.2	10.4	10.0	10.0	102	104	73-133	2	15	
1,2,4-Trichlorobenzene	9.51	9.76	10.0	10.0	95	98	80-139	3	18	
Hexachlorobutadiene	8.51	8.67	10.0	10.0	85	87	80-151	2	18	
1,2,3-Trichlorobenzene	10.1	10.2	10.0	10.0	101	102	75-146	1	28	
Surrogate:										
Dibromofluoromethane					85	83	75-127			
Toluene-d8					91	91	80-127			
4-Bromofluorobenzene					104	102	78-125			



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Naphthalene	0.14	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	0.46	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	0.87	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	0.13	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.15	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	0.097	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.14	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	0.080	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.036	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	88	39-111				
Pyrene-d10	108	47-114				
Terphenyl-d14	106	44-121				

Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Naphthalene	0.58	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	27	0.71	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	37	0.71	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.16	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.042	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	95	39-111				
Pyrene-d10	124	47-114				
Terphenyl-d14	102	44-121				

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Date of Report: September 22, 2023
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PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Naphthalene	0.17	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
2-Methylnaphthalene	7.3	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
1-Methylnaphthalene	15	0.14	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]anthracene	0.13	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Chrysene	0.38	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[b]fluoranthene	0.046	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo(j,k)fluoranthene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Benzo[a]pyrene	0.074	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Indeno(1,2,3-c,d)pyrene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
Dibenz[a,h]anthracene	ND	0.035	EPA 8270E/SIM	9-13-23	9-14-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>88</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>95</i>	<i>44-121</i>				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0913S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[a]anthracene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Chrysene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[b]fluoranthene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo(j,k)fluoranthene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Benzo[a]pyrene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
Dibenz[a,h]anthracene	ND	0.0017	EPA 8270E/SIM	9-13-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	83	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	99	44-121				



Date of Report: September 22, 2023
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 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0913S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0738	0.0726	0.0833	0.0833	89	87	57-116	2	16	
Acenaphthylene	0.0806	0.0811	0.0833	0.0833	97	97	59-124	1	15	
Acenaphthene	0.0735	0.0765	0.0833	0.0833	88	92	59-124	4	15	
Fluorene	0.0771	0.0804	0.0833	0.0833	93	97	62-122	4	15	
Phenanthrene	0.0699	0.0711	0.0833	0.0833	84	85	62-119	2	15	
Anthracene	0.0833	0.0924	0.0833	0.0833	100	111	64-123	10	15	
Fluoranthene	0.0770	0.0826	0.0833	0.0833	92	99	63-123	7	15	
Pyrene	0.0766	0.0808	0.0833	0.0833	92	97	62-124	5	15	
Benzo[a]anthracene	0.0695	0.0737	0.0833	0.0833	83	88	59-131	6	15	
Chrysene	0.0804	0.0842	0.0833	0.0833	97	101	61-124	5	15	
Benzo[b]fluoranthene	0.0772	0.0783	0.0833	0.0833	93	94	60-126	1	15	
Benzo(j,k)fluoranthene	0.0846	0.0930	0.0833	0.0833	102	112	63-121	9	17	
Benzo[a]pyrene	0.0828	0.0867	0.0833	0.0833	99	104	60-122	5	15	
Indeno(1,2,3-c,d)pyrene	0.0707	0.0668	0.0833	0.0833	85	80	58-127	6	15	
Dibenz[a,h]anthracene	0.0791	0.0832	0.0833	0.0833	95	100	60-124	5	15	
Benzo[g,h,i]perylene	0.0701	0.0738	0.0833	0.0833	84	89	58-124	5	15	
Surrogate:										
2-Fluorobiphenyl					88	88	39-111			
Pyrene-d10					96	99	47-114			
Terphenyl-d14					99	101	44-121			



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Aroclor 1016	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1221	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1232	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1242	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1248	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1254	0.13	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1260	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1262	ND	0.054	EPA 8082A	9-15-23	9-20-23	
Aroclor 1268	0.068	0.054	EPA 8082A	9-15-23	9-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	49	50-127				Q
Client ID: ST-SS-15-6.5-083023						
Laboratory ID: 08-357-15						
Aroclor 1016	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.053	EPA 8082A	9-15-23	9-16-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	69	50-127				
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Aroclor 1016	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.053	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.053	EPA 8082A	9-15-23	9-16-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	77	50-127				



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0915S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	9-15-23	9-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	93	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES										
Laboratory ID:	09-141-16									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.800	0.773	0.500	0.500	0.436	73	67	41-121	3	28
Surrogate:										
DCB						75	70	50-127		



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: NT-SS-13-5.0-083023						
Laboratory ID: 08-357-06						
Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	27	2.7	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.54	EPA 6010D	9-20-23	9-20-23	
Chromium	7.9	0.54	EPA 6010D	9-20-23	9-20-23	
Copper	21	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.4	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.27	EPA 7471B	9-14-23	9-14-23	
Nickel	11	2.7	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	23	2.7	EPA 6010D	9-20-23	9-20-23	

Client ID: ST-SS-15-6.5-083023

Laboratory ID: 08-357-15

Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	21	2.6	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.53	EPA 6010D	9-20-23	9-20-23	
Chromium	7.1	0.53	EPA 6010D	9-20-23	9-20-23	
Copper	7.8	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	11	5.3	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.26	EPA 7471B	9-14-23	9-14-23	
Nickel	7.5	2.6	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	20	2.6	EPA 6010D	9-20-23	9-20-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-SS-17-6.5-083023						
Laboratory ID: 08-357-17						
Arsenic	ND	11	EPA 6010D	9-20-23	9-20-23	
Barium	25	2.7	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.53	EPA 6010D	9-20-23	9-20-23	
Chromium	8.3	0.53	EPA 6010D	9-20-23	9-20-23	
Copper	8.1	1.1	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.3	EPA 6010D	9-20-23	9-20-23	
Mercury	ND	0.27	EPA 7471B	9-14-23	9-14-23	
Nickel	8.0	2.7	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	11	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.1	EPA 6010D	9-20-23	9-20-23	
Zinc	22	2.7	EPA 6010D	9-20-23	9-20-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0920SM2					
Arsenic	ND	10	EPA 6010D	9-20-23	9-20-23	
Barium	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Cadmium	ND	0.50	EPA 6010D	9-20-23	9-20-23	
Chromium	ND	0.50	EPA 6010D	9-20-23	9-20-23	
Copper	ND	1.0	EPA 6010D	9-20-23	9-20-23	
Lead	ND	5.0	EPA 6010D	9-20-23	9-20-23	
Nickel	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Selenium	ND	10	EPA 6010D	9-20-23	9-20-23	
Silver	ND	1.0	EPA 6010D	9-20-23	9-20-23	
Zinc	ND	2.5	EPA 6010D	9-20-23	9-20-23	
Laboratory ID:	MB0914S1					
Mercury	ND	0.25	EPA 7471B	9-14-23	9-14-23	



Date of Report: September 22, 2023
 Samples Submitted: August 31, 2023
 Laboratory Reference: 2308-357B
 Project: Jorgensen UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-187-15							
	ORIG	DUP						
Arsenic	24.2	24.3	NA	NA	NA	NA	1	20
Barium	68.9	73.0	NA	NA	NA	NA	6	20
Cadmium	0.580	ND	NA	NA	NA	NA	NA	20
Chromium	52.4	80.1	NA	NA	NA	NA	42	20
Copper	11.4	12.2	NA	NA	NA	NA	7	20
Lead	32.1	28.7	NA	NA	NA	NA	11	20
Nickel	266	348	NA	NA	NA	NA	27	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	96.0	105	NA	NA	NA	NA	9	20

Laboratory ID:	09-034-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-187-15									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	123	122	100	100	24.2	99	98	75-125	0	20
Barium	170	170	100	100	68.9	101	101	75-125	0	20
Cadmium	45.0	44.6	50.0	50.0	0.580	89	88	75-125	1	20
Chromium	161	151	100	100	52.4	109	98	75-125	7	20
Copper	61.4	59.9	50.0	50.0	11.4	100	97	75-125	2	20
Lead	284	282	250	250	32.1	101	100	75-125	1	20
Nickel	399	342	100	100	266	132	76	75-125	15	20
Selenium	94.2	93.6	100	100	ND	94	94	75-125	1	20
Silver	24.7	23.9	25.0	25.0	ND	99	96	75-125	3	20
Zinc	186	176	100	100	96.0	90	80	75-125	6	20

Laboratory ID:	09-034-01									
Mercury	0.494	0.488	0.500	0.500	0.0158	96	94	80-120	1	20



Date of Report: September 22, 2023
Samples Submitted: August 31, 2023
Laboratory Reference: 2308-357B
Project: Jorgensen UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
NT-SS-13-5.0-083023	08-357-06	7	9-5-23
ST-SS-15-6.5-083023	08-357-15	6	9-5-23
ST-SS-17-6.5-083023	08-357-17	6	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Onsite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 3

Company: DH Environmental		Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)		Laboratory Number: 08-357															
Project Name: Torresen UST Site Assessment		☒ 5-day (other)																	
Project Manager: N. Moxley																			
Sampled by: N. Moxley																			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers														
1	NT-SS-20-5.0-083023	8/30/23	10:15	Soil	5	NWTPH-HCID													
2	NT-SS-21-5.0-083023		10:25			NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)													
3	NT-SS-22-5.0-083023		10:30			NWTPH-Gx													
4	NT-SS-23-5.0-083023		10:40			NWTPH-Dx (SG Clean-up ☐)													
5	NT-SS-14-5.0-083023		10:05			Volatiles 8260 *													
6	NT-SS-13-5.0-083023		10:00			Halogenated Volatiles 8260													
7	NT-SS-12-5.0-083023		09:55			EDB EPA 8011 (Waters Only)													
8	NT-SS-11-5.0-083023		10:45			Semivolatiles 8270/SIM (with low-level PAHs)													
9	NT-SS-28-6.5-083023		09:45			PAHs 8270/SIM (low-level)													
10	NT-SS-27-6.5-083023		09:35			CPAHs + Naphthalenes													
					PCBs 8082														
					Organochlorine Pesticides 8081														
					Organophosphorus Pesticides 8270/SIM														
					Chlorinated Acid Herbicides 8151														
					Total RCRA Metals														
					Total MTCA Metals														
					TCLP Metals														
					HEM (oil and grease) 1664														
					%														
					Moisture														
Signature: <i>N. Moxley</i>		Company: DHE		Date: 8-31-23		Time: 12:10		Comments/Special Instructions											
Received								- please report lowest possible reporting limits											
Relinquished								- samples may have elevated petroleum concentrations											
Received								* - EDB, EDC, MTBE, BTEX, hVACs											
Relinquished								X Added 9/12/23. DB (STA)											
Received								Data Package: Standard ☒ Level III ☐ Level IV ☐											
Relinquished								Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐											



Chain of Custody

Page 2 of 3

Environmental Inc. Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 833-3881 • www.onsite-env.com		Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)		Laboratory Number: 08-357	
Company: DH Environmental		Project Name: Tonguesen UT Site Assessment		Project Number:	
Project Manager: N. Moxley		Sampled by: N. Moxley		Turnaround Request (in working days) (Check One) ☒ 5-day (other)	
Sampled by: N. Moxley		Date Sampled: 8/30/23		Time Sampled: 0930	
Lab ID		Sample Identification		Matrix	
11	NT-SS-26-6.5-083023	1220		Soil	
12	ST-SS-3-8.5-083023	1225		Soil	
13	ST-SS-4-8.5-083023	1235		Soil	
14	ST-SS-5-8.5-083023	1250		Soil	
15	ST-SS-15-6.5-083023	1300		Soil	
16	ST-SS-16-6.5-083023	1310		Soil	
17	ST-SS-17-6.5-083023	1320		Soil	
18	ST-SS-18-6.5-083023	1330		Soil	
19	ST-SS-19-6.5-083023	1210		Soil	
20	ST-SS-9-6.5-083023	1210		Soil	
Signature: N. Moxley		Company: DHE		Date: 8-31-23	
Received: Michael R. Smith		Received: OSF		Time: 1214	
Relinquished		Relinquished		Relinquished	
Received		Received		Received	
Relinquished		Relinquished		Relinquished	
Received		Received		Received	
Relinquished		Relinquished		Relinquished	
Received		Received		Received	
Relinquished		Relinquished		Relinquished	
Reviewed/Date		Reviewed/Date		Reviewed/Date	
Data Package: Standard ☒ Level III ☐ Level IV ☐		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐		Comments/Special Instructions	



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Chain of Custody

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October 17, 2023

Nathan Moxley
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge UST Site Assessment
Laboratory Reference No. 2310-177

Dear Nathan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 13, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

Case Narrative

Samples were collected on October 13, 2023 and received by the laboratory on October 13, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Chloroethane, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Gasoline Range Organics	220	7.8	NWTPH-Gx	10-16-23	10-16-23	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				
Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Gasoline	ND	4.8	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-126				
Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Gasoline	ND	4.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-126				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Gasoline	ND	5.0	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-177-03							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				93	90	65-126		



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>81</i>	<i>65-122</i>				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Gasoline	ND	100	NWTPH-Gx	10-16-23	10-16-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	74	65-122				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-160-01									
	ORIG	DUP								
Gasoline	ND	ND	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						75	73	65-122		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	ST-piping-SS-20-6.5					
Laboratory ID:	10-177-01					
Diesel Fuel #2	3400	140	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	860	290	NWTPH-Dx	10-16-23	10-16-23	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	129	50-150				

Client ID:	ST-piping-SS-21-2.0					
Laboratory ID:	10-177-02					
Diesel Range Organics	120	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	260	56	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				

Client ID:	ST-piping-SS-22-2.0					
Laboratory ID:	10-177-03					
Diesel Range Organics	ND	28	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil	190	55	NWTPH-Dx	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Diesel Range Organics	ND	25	NWTPH-Dx	10-16-23	10-16-23	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	78	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-177-01									
	ORIG	DUP								
Diesel Fuel #2	2970	2830	NA	NA		NA	NA	5	40	
Lube Oil	759	801	NA	NA		NA	NA	5	40	
Surrogate:										
o-Terphenyl						129	121	50-150		



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Dichlorodifluoromethane	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.048	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.18	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Toluene	0.40	0.18	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
(trans) 1,3-Dichloropropene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	0.46	0.037	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	2.1	0.073	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.87	0.037	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.18	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.037	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.18	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.037	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0011	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0041	EPA 8260D	10-16-23	10-16-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00082	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0016	EPA 8260D	10-16-23	10-16-23	
o-Xylene	0.0012	0.00082	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0041	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.25	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Dichlorodifluoromethane	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.00096	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0015	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0037	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>92</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-130</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.0013	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	



Date of Report: October 17, 2023
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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.0020	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	96	71-130				



Date of Report: October 17, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0382	0.0378	0.0500	0.0500	76	76	30-160	1	26	
Chloromethane	0.0437	0.0437	0.0500	0.0500	87	87	59-131	0	26	
Vinyl Chloride	0.0387	0.0382	0.0500	0.0500	77	76	68-136	1	23	
Bromomethane	0.0439	0.0437	0.0500	0.0500	88	87	48-155	0	32	
Chloroethane	0.0471	0.0468	0.0500	0.0500	94	94	67-141	1	16	
Trichlorofluoromethane	0.0490	0.0484	0.0500	0.0500	98	97	76-127	1	19	
1,1-Dichloroethene	0.0469	0.0478	0.0500	0.0500	94	96	75-129	2	19	
Iodomethane	0.0454	0.0433	0.0500	0.0500	91	87	37-140	5	27	
Methylene Chloride	0.0470	0.0482	0.0500	0.0500	94	96	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0475	0.0481	0.0500	0.0500	95	96	79-133	1	15	
Methyl t-Butyl Ether	0.0520	0.0531	0.0500	0.0500	104	106	73-125	2	17	
1,1-Dichloroethane	0.0472	0.0473	0.0500	0.0500	94	95	79-125	0	17	
2,2-Dichloropropane	0.0478	0.0492	0.0500	0.0500	96	98	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0469	0.0473	0.0500	0.0500	94	95	75-131	1	15	
Bromochloromethane	0.0509	0.0521	0.0500	0.0500	102	104	80-126	2	15	
Chloroform	0.0474	0.0480	0.0500	0.0500	95	96	80-123	1	15	
1,1,1-Trichloroethane	0.0472	0.0478	0.0500	0.0500	94	96	78-124	1	21	
Carbon Tetrachloride	0.0480	0.0481	0.0500	0.0500	96	96	74-127	0	18	
1,1-Dichloropropene	0.0470	0.0480	0.0500	0.0500	94	96	80-123	2	15	
Benzene	0.0462	0.0459	0.0500	0.0500	92	92	80-122	1	18	
1,2-Dichloroethane	0.0502	0.0515	0.0500	0.0500	100	103	75-124	3	15	
Trichloroethene	0.0470	0.0473	0.0500	0.0500	94	95	80-129	1	18	
1,2-Dichloropropane	0.0481	0.0489	0.0500	0.0500	96	98	80-123	2	15	
Dibromomethane	0.0494	0.0512	0.0500	0.0500	99	102	80-123	4	15	
Bromodichloromethane	0.0495	0.0491	0.0500	0.0500	99	98	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0515	0.0521	0.0500	0.0500	103	104	80-130	1	15	
Toluene	0.0441	0.0446	0.0500	0.0500	88	89	80-120	1	18	
(trans) 1,3-Dichloropropene	0.0561	0.0567	0.0500	0.0500	112	113	80-124	1	15	



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0539	0.0576	0.0500	0.0500	108	115	80-120	7	15	
Tetrachloroethene	0.0515	0.0520	0.0500	0.0500	103	104	77-126	1	15	
1,3-Dichloropropane	0.0530	0.0554	0.0500	0.0500	106	111	77-123	4	15	
Dibromochloromethane	0.0549	0.0565	0.0500	0.0500	110	113	80-128	3	16	
1,2-Dibromoethane	0.0551	0.0570	0.0500	0.0500	110	114	80-122	3	20	
Chlorobenzene	0.0513	0.0523	0.0500	0.0500	103	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0521	0.0533	0.0500	0.0500	104	107	80-120	2	15	
Ethylbenzene	0.0504	0.0511	0.0500	0.0500	101	102	80-120	1	15	
m,p-Xylene	0.105	0.105	0.100	0.100	105	105	80-120	0	15	
o-Xylene	0.0519	0.0520	0.0500	0.0500	104	104	80-120	0	15	
Bromoform	0.0553	0.0584	0.0500	0.0500	111	117	78-126	5	15	
Bromobenzene	0.0525	0.0538	0.0500	0.0500	105	108	79-124	2	15	
1,1,2,2-Tetrachloroethane	0.0535	0.0563	0.0500	0.0500	107	113	75-122	5	17	
1,2,3-Trichloropropane	0.0560	0.0589	0.0500	0.0500	112	118	72-125	5	20	
2-Chlorotoluene	0.0525	0.0526	0.0500	0.0500	105	105	75-128	0	15	
4-Chlorotoluene	0.0556	0.0577	0.0500	0.0500	111	115	78-127	4	16	
1,3-Dichlorobenzene	0.0526	0.0538	0.0500	0.0500	105	108	78-123	2	17	
1,4-Dichlorobenzene	0.0547	0.0548	0.0500	0.0500	109	110	77-121	0	17	
1,2-Dichlorobenzene	0.0562	0.0569	0.0500	0.0500	112	114	80-120	1	15	
1,2-Dibromo-3-chloropropane	0.0569	0.0647	0.0500	0.0500	114	129	61-137	13	28	
1,2,4-Trichlorobenzene	0.0543	0.0530	0.0500	0.0500	109	106	77-127	2	17	
Hexachlorobutadiene	0.0456	0.0463	0.0500	0.0500	91	93	77-125	2	22	
1,2,3-Trichlorobenzene	0.0584	0.0593	0.0500	0.0500	117	119	77-124	2	19	
Surrogate:										
Dibromofluoromethane					98	97	75-130			
Toluene-d8					95	95	78-128			
4-Bromofluorobenzene					106	108	71-130			



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 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	trip blank					
Laboratory ID:	10-177-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>78-125</i>				



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloromethane	ND	1.3	EPA 8260D	10-16-23	10-16-23	
Vinyl Chloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromomethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Chloroethane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Iodomethane	ND	5.0	EPA 8260D	10-16-23	10-16-23	
Methylene Chloride	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chloroform	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Benzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Trichloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromomethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromodichloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Toluene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-16-23	10-16-23	



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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Tetrachloroethene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Dibromochloromethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Chlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Ethylbenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
m,p-Xylene	ND	0.40	EPA 8260D	10-16-23	10-16-23	
o-Xylene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
Bromoform	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Bromobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-16-23	10-16-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-16-23	10-16-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260D	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD		Flags
					Recovery		Limits		RPD	Limit	
SPIKE BLANKS											
Laboratory ID:	SB1016W1										
	SB	SBD	SB	SBD	SB	SBD					
Dichlorodifluoromethane	11.4	9.59	10.0	10.0	114	96	34-166	17	21		
Chloromethane	7.69	6.63	10.0	10.0	77	66	63-138	15	18		
Vinyl Chloride	9.12	8.03	10.0	10.0	91	80	71-135	13	20		
Bromomethane	11.4	10.1	10.0	10.0	114	101	20-151	12	36		
Chloroethane	8.59	7.29	10.0	10.0	86	73	76-125	16	20	I	
Trichlorofluoromethane	10.3	9.42	10.0	10.0	103	94	75-131	9	19		
1,1-Dichloroethene	10.1	9.00	10.0	10.0	101	90	78-125	12	19		
Iodomethane	13.3	12.1	10.0	10.0	133	121	10-155	9	40		
Methylene Chloride	9.44	8.62	10.0	10.0	94	86	80-120	9	15		
(trans) 1,2-Dichloroethene	9.52	8.82	10.0	10.0	95	88	80-125	8	17		
Methyl t-Butyl Ether	10.1	9.23	10.0	10.0	101	92	80-122	9	15		
1,1-Dichloroethane	9.61	8.69	10.0	10.0	96	87	80-125	10	17		
2,2-Dichloropropane	11.5	10.9	10.0	10.0	115	109	80-146	5	21		
(cis) 1,2-Dichloroethene	10.0	9.32	10.0	10.0	100	93	80-129	7	17		
Bromochloromethane	9.81	9.31	10.0	10.0	98	93	80-125	5	18		
Chloroform	9.93	9.12	10.0	10.0	99	91	80-123	9	16		
1,1,1-Trichloroethane	10.1	9.13	10.0	10.0	101	91	80-123	10	18		
Carbon Tetrachloride	10.4	9.59	10.0	10.0	104	96	80-126	8	17		
1,1-Dichloropropene	10.0	9.31	10.0	10.0	100	93	80-126	7	18		
Benzene	9.37	8.53	10.0	10.0	94	85	80-121	9	16		
1,2-Dichloroethane	11.1	10.3	10.0	10.0	111	103	80-124	7	15		
Trichloroethene	10.5	9.54	10.0	10.0	105	95	80-122	10	18		
1,2-Dichloropropane	9.46	8.85	10.0	10.0	95	89	80-123	7	15		
Dibromomethane	10.4	9.64	10.0	10.0	104	96	80-123	8	15		
Bromodichloromethane	10.8	9.70	10.0	10.0	108	97	80-125	11	15		
(cis) 1,3-Dichloropropene	10.6	9.81	10.0	10.0	106	98	80-129	8	15		
Toluene	9.63	9.18	10.0	10.0	96	92	80-120	5	18		
(trans) 1,3-Dichloropropene	11.9	11.1	10.0	10.0	119	111	80-134	7	17		



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery	RPD	RPD	Flags
					Recovery		Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB1016W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	9.97	9.87	10.0	10.0	100	99	77-126	1	20	
Tetrachloroethene	11.5	11.0	10.0	10.0	115	110	80-124	4	18	
1,3-Dichloropropane	10.5	10.1	10.0	10.0	105	101	80-120	4	15	
Dibromochloromethane	11.5	10.6	10.0	10.0	115	106	80-128	8	15	
1,2-Dibromoethane	11.6	10.6	10.0	10.0	116	106	80-127	9	15	
Chlorobenzene	11.2	11.0	10.0	10.0	112	110	80-120	2	17	
1,1,1,2-Tetrachloroethane	11.2	10.9	10.0	10.0	112	109	80-125	3	17	
Ethylbenzene	11.0	10.6	10.0	10.0	110	106	80-125	4	18	
m,p-Xylene	22.3	21.7	20.0	20.0	112	109	80-127	3	18	
o-Xylene	10.9	10.7	10.0	10.0	109	107	80-126	2	18	
Bromoform	12.6	12.0	10.0	10.0	126	120	80-130	5	15	
Bromobenzene	11.1	10.5	10.0	10.0	111	105	76-128	6	16	
1,1,2,2-Tetrachloroethane	10.3	10.3	10.0	10.0	103	103	74-130	0	15	
1,2,3-Trichloropropane	9.95	9.79	10.0	10.0	100	98	71-129	2	25	
2-Chlorotoluene	11.2	11.4	10.0	10.0	112	114	80-128	2	18	
4-Chlorotoluene	11.4	11.2	10.0	10.0	114	112	80-130	2	19	
1,3-Dichlorobenzene	11.6	11.4	10.0	10.0	116	114	80-126	2	17	
1,4-Dichlorobenzene	11.3	11.3	10.0	10.0	113	113	80-121	0	17	
1,2-Dichlorobenzene	11.4	11.3	10.0	10.0	114	113	79-125	1	15	
1,2-Dibromo-3-chloropropane	11.7	11.4	10.0	10.0	117	114	73-133	3	15	
1,2,4-Trichlorobenzene	13.6	14.5	10.0	10.0	136	145	80-139	6	18	I
Hexachlorobutadiene	12.8	13.1	10.0	10.0	128	131	80-151	2	18	
1,2,3-Trichlorobenzene	13.9	15.1	10.0	10.0	139	151	75-146	8	28	I
Surrogate:										
Dibromofluoromethane					104	102	75-127			
Toluene-d8					111	109	80-127			
4-Bromofluorobenzene					100	103	78-125			



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Naphthalene	2.1	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	6.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
1-Methylnaphthalene	4.6	0.15	EPA 8270E/SIM	10-16-23	10-17-23	
Benzo[a]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.071	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.045	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.034	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	69	39-111				
Pyrene-d10	97	47-114				
Terphenyl-d14	76	44-121				

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Naphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.11	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.18	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.056	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.13	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.16	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.031	0.030	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	80	39-111				
Pyrene-d10	91	47-114				
Terphenyl-d14	93	44-121				



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Naphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	0.57	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	0.59	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	0.68	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	0.23	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	0.63	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	0.37	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	0.088	0.029	EPA 8270E/SIM	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	74	39-111				
Pyrene-d10	87	47-114				
Terphenyl-d14	92	44-121				



Date of Report: October 17, 2023
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 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Chrysene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	10-16-23	10-16-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>80</i>	<i>39-111</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>47-114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>44-121</i>				



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 Project: Star Forge UST Site Assessment

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0700	0.0664	0.0833	0.0833	84	80	57-116	5	16	
Acenaphthylene	0.0796	0.0743	0.0833	0.0833	96	89	59-124	7	15	
Acenaphthene	0.0749	0.0709	0.0833	0.0833	90	85	59-124	5	15	
Fluorene	0.0739	0.0752	0.0833	0.0833	89	90	62-122	2	15	
Phenanthrene	0.0685	0.0776	0.0833	0.0833	82	93	62-119	12	15	
Anthracene	0.0749	0.0863	0.0833	0.0833	90	104	64-123	14	15	
Fluoranthene	0.0757	0.0820	0.0833	0.0833	91	98	63-123	8	15	
Pyrene	0.0772	0.0822	0.0833	0.0833	93	99	62-124	6	15	
Benzo[a]anthracene	0.0756	0.0754	0.0833	0.0833	91	91	59-131	0	15	
Chrysene	0.0784	0.0790	0.0833	0.0833	94	95	61-124	1	15	
Benzo[b]fluoranthene	0.0783	0.0764	0.0833	0.0833	94	92	60-126	2	15	
Benzo(j,k)fluoranthene	0.0827	0.0847	0.0833	0.0833	99	102	63-121	2	17	
Benzo[a]pyrene	0.0783	0.0785	0.0833	0.0833	94	94	60-122	0	15	
Indeno(1,2,3-c,d)pyrene	0.0760	0.0777	0.0833	0.0833	91	93	58-127	2	15	
Dibenz[a,h]anthracene	0.0833	0.0849	0.0833	0.0833	100	102	60-124	2	15	
Benzo[g,h,i]perylene	0.0808	0.0817	0.0833	0.0833	97	98	58-124	1	15	
Surrogate:										
2-Fluorobiphenyl					80	76	39-111			
Pyrene-d10					83	88	47-114			
Terphenyl-d14					92	92	44-121			



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Aroclor 1016	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.057	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Aroclor 1016	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.055	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1221	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1232	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1242	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1248	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1254	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1260	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1262	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Aroclor 1268	ND	0.050	EPA 8082A	10-16-23	10-16-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1016S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.428	0.432	0.500	0.500	N/A	86	86	55-119	1	34	
Surrogate:											
DCB						92	91	50-127			



Date of Report: October 17, 2023
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 Laboratory Reference: 2310-177
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**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-20-6.5						
Laboratory ID: 10-177-01						
Arsenic	31	11	EPA 6010D	10-13-23	10-13-23	
Barium	82	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	0.85	0.57	EPA 6010D	10-13-23	10-13-23	
Chromium	25	0.57	EPA 6010D	10-13-23	10-13-23	
Copper	67	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	49	5.7	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	94	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	280	2.8	EPA 6010D	10-13-23	10-13-23	

Client ID: ST-piping-SS-21-2.0						
Laboratory ID: 10-177-02						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	41	2.8	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	55	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	56	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.28	EPA 7471B	10-16-23	10-16-23	
Nickel	64	2.8	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	44	2.8	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: ST-piping-SS-22-2.0						
Laboratory ID: 10-177-03						
Arsenic	ND	11	EPA 6010D	10-13-23	10-13-23	
Barium	33	2.7	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.55	EPA 6010D	10-13-23	10-13-23	
Chromium	20	0.55	EPA 6010D	10-13-23	10-13-23	
Copper	30	1.1	EPA 6010D	10-13-23	10-13-23	
Lead	18	5.5	EPA 6010D	10-13-23	10-13-23	
Mercury	ND	0.27	EPA 7471B	10-16-23	10-16-23	
Nickel	58	2.7	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	11	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.1	EPA 6010D	10-13-23	10-13-23	
Zinc	43	2.7	EPA 6010D	10-13-23	10-13-23	



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013SM1					
Arsenic	ND	10	EPA 6010D	10-13-23	10-13-23	
Barium	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Cadmium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Chromium	ND	0.50	EPA 6010D	10-13-23	10-13-23	
Copper	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Lead	ND	5.0	EPA 6010D	10-13-23	10-13-23	
Nickel	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Selenium	ND	10	EPA 6010D	10-13-23	10-13-23	
Silver	ND	1.0	EPA 6010D	10-13-23	10-13-23	
Zinc	ND	2.5	EPA 6010D	10-13-23	10-13-23	
Laboratory ID:	MB1016S1					
Mercury	ND	0.25	EPA 7471B	10-16-23	10-16-23	



Date of Report: October 17, 2023
 Samples Submitted: October 13, 2023
 Laboratory Reference: 2310-177
 Project: Star Forge UST Site Assessment

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-091-04							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	18.0	17.5	NA	NA	NA	NA	3	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	9.65	9.10	NA	NA	NA	NA	6	20
Copper	16.6	17.8	NA	NA	NA	NA	7	20
Lead	24.5	27.9	NA	NA	NA	NA	13	20
Nickel	7.25	7.35	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Zinc	43.8	42.7	NA	NA	NA	NA	3	20

Laboratory ID:	10-089-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	10-091-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	102	101	100	100	ND	102	101	75-125	1	20
Barium	116	115	100	100	18.0	98	97	75-125	1	20
Cadmium	47.3	46.4	50.0	50.0	ND	95	93	75-125	2	20
Chromium	109	107	100	100	9.65	100	97	75-125	2	20
Copper	67.1	65.7	50.0	50.0	16.6	101	98	75-125	2	20
Lead	282	275	250	250	24.5	103	100	75-125	2	20
Nickel	108	105	100	100	7.25	101	98	75-125	2	20
Selenium	94.0	93.1	100	100	ND	94	93	75-125	1	20
Silver	24.6	24.0	25.0	25.0	ND	98	96	75-125	2	20
Zinc	139	139	100	100	43.8	95	95	75-125	0	20

Laboratory ID:	10-089-02									
Mercury	0.509	0.527	0.500	0.500	0.0446	93	97	80-120	3	20



Date of Report: October 17, 2023
Samples Submitted: October 13, 2023
Laboratory Reference: 2310-177
Project: Star Forge UST Site Assessment

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
ST-piping-SS-20-6.5	10-177-01	12	10-13-23
ST-piping-SS-21-2.0	10-177-02	10	10-13-23
ST-piping-SS-22-2.0	10-177-03	9	10-13-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.qnsite-env.com

[illegible]



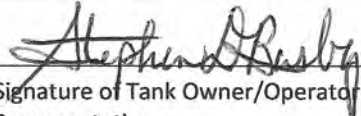
PERMANENT CLOSURE NOTICE

FOR UNDERGROUND STORAGE TANKS

UST ID #: _____

County: _____

This notice certifies that permanent closure activities were performed and conducted in accordance with Chapter 173-360A WAC. Instructions are found on the back page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION							
Facility Compliance Tag #:	604 027 650	Owner/Operator Name: Star Forge							
UST ID #:	6163	Business Name: Star Forge							
Site Name:	Former Jorgensen Forge	Address: 8531 E. Marginal Way S.							
Site Address:	8531 E. Marginal Way S.	City:	Tukwila	State:	WA	Zip:	98108		
City:	Tukwila, WA	Phone: Wayne Turk, 206-255-8177							
Phone:	Wayne Turk, 206-255-8177	Email: wturk@jorgensenforge.com							
III. CERTIFIED UST DECOMMISSIONER									
Company Name: EcoCon, Inc. (ECI)		Service Provider Name: EcoCon, Inc. (ECI)							
Address: 15 S. Oregon Ave., Suite 104		Certification Type: Decommissioning							
City:	Tacoma	State:	WA	Zip:	98409	Cert. No.:	8289423	Exp. Date:	03/04/2024
Provider Phone: 206-779-0050		Provider Email: brad@alleci.com							
Provider Signature: 		Date:		6/5/2024					
IV. TANK INFORMATION									
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	removal	closed-in-place	change-in-service	CLOSURE DATE			
See attached pages for tank information			☐	☐	☐				
All tanks closed by permanent removal on 8/18/2023			☐	☐	☐				
			☐	☐	☐				
			☐	☐	☐				
			☐	☐	☐				
			☐	☐	☐				
V. REQUIRED SIGNATURE									
Signature acknowledges UST(s) comply with UST regulation WAC 173-360A-0810 Permanent Closure Requirements.									
06/05/2024				STEPHEN BUSBY					
Date	Signature of Tank Owner/Operator or Authorized Representative			Print or Type Name					

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	First Tank			Second Tank			Third Tank			Fourth Tank			Fifth Tank		
A Tank name	UST-15			UST-16			UST-17			UST-18			UST-19		
B Tank installation date	~ 1942			~ 1942			~ 1942			~ 1942			~ 1942		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~ 1942			~ 1942			~ 1942			~ 1942			~ 1942		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	D			D			D			D			D		
R Substance use	B			B			B			B			B		
S Compartment capacity	12,000			12,000			12,000			12,000			12,000		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	6th Tank			7th Tank			8th Tank			9th Tank			10th Tank		
A Tank name	UST-20			UST-21			UST-22			UST-26			UST-27		
B Tank installation date	~ 1942			~ 1942			~ 1942			~1975			~1975		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~ 1942			~ 1942			~ 1942			~1975			~1975		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	D			D			D			O			O		
R Substance use	B			B			B			G			G		
S Compartment capacity	12,000			12,000			12,000			13,500			13,500		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	11th Tank			12th Tank			13th Tank			14th Tank			15th Tank		
A Tank name	UST-28			UST-29			UST-30			UST-31			UST-32		
B Tank installation date	~1975			~1975			~1975			~1975			~1975		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~1975			~1975			~1975			~1975			~1975		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	O			O			O			O			O		
R Substance use	G			G			G			G			G		
S Compartment capacity	13,500			13,500			13,500			13,500			13,500		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	16th Tank			17th Tank			18th Tank			19th Tank			20th Tank		
A Tank name	UST-33			UST-34			UST-35								
B Tank installation date	~1975			~1975			~1975								
D Tank material	A			A			A								
E1 Tank construction	A			A			A								
E2 Manifolded tank	A			A			A								
F Tank release detection	O			O			O								
H Tank corrosion protection	O			O			O								
I Spill prevention	O			O			O								
J Overfill protection	O			O			O								
K2 Piping Installation Date	~1975			~1975			~1975								
K1 Piping material	A			A			A								
L Piping construction	A			A			A								
M1 Piping release detection (primary)	O			O			O								
M2 Piping release detection (secondary)	J			J			J								
M3 Turbine sump construction	O			O			O								
O1 Piping corrosion protection	O			O			O								
O2 Steel flex connector at tank	J			J			J								
O3 Steel flex connector at dispenser/pump	J			J			J								
P Pumping system	O			O			O								
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	O			O			O								
R Substance use	G			G			G								
S Compartment capacity	13,500			13,500			13,500								



SITE CHECK/SITE ASSESSMENT CHECKLIST

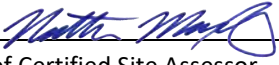
FOR UNDERGROUND STORAGE TANKS

UST ID #: _____

County: _____

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360A WAC. Instructions are found on the last page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION	
Facility Compliance Tag #:	604 027 650	Owner/Operator Name:	Star Forge
UST ID #:	6163	Business Name:	Star Forge
Site Name:	Former Jorgensen Forge	Address:	8531 E. Marginal Way S.
Site Address:	8531 E. Marginal Way S.	City:	Tukwila
		State:	WA
		Zip:	98108
City:	Tukwila, WA	Phone:	Wayne Turk, 206-255-8177
Phone:	Wayne Turk, 206-255-8177	Email:	wturk@jorgensenforge.com
III. CERTIFIED SITE ASSESSOR			
Service Provider Name:		Company Name:	
Nathan Moxley		DH Environmental, Inc.	
Cell Phone:	509-332-9281	Email:	nathan.moxley@dhenviro.com
Address:		1011 SW Klickitat Way, #107	
Certification #:	WA LHG, # 3024	Exp. Date:	6/7/2024
		City:	Seattle
		State:	WA
		Zip:	98134
IV. TANK INFORMATION			
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
See attached pages for tank information			
Site assessment sampling for all tanks completed between 8/21/23 and 10/13/23			
V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)			
☐ Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).			
☐ Release investigation following a failed tank and/or line tightness test.			
☐ Release investigation following discovery of contaminated soil and/or groundwater.			
☐ Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.			
☐ UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).			
☐ Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.			
☒ Other (describe): As required by Agreed Order No. DE 21034			

VI. CHECKLIST		
The site assessor must check each of the following items and include it in the report. Sections referenced below can be found in the Ecology publication <i>Guidance for Site Checks and Site Assessments for Underground Storage Tanks.</i>		YES NO
1. The location of the UST site is shown on a vicinity map.	☒	☐
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	☒	☐
3. A summary of UST system data is provided (Section 3.1)	☒	☐
4. The soils characteristics at the UST site are described. (Section 5.2)	☒	☐
5. Is there any apparent groundwater in the tank excavation?	☐	☒
6. A brief description of the surrounding land use is provided. (Section 3.1)	☒	☐
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	☒	☐
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	☒	☐
• If applicable, groundwater samples are distinguished from soil samples	☐	☐
• Location of samples collected from stockpiled excavated soil	☒	☐
• Tank and piping locations and limits of excavation pit	☒	☐
• Adjacent structures and streets	☒	☐
• Approximate locations of any on-site and nearby utilities	☒	☐
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	☒	☐
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	☒	☐
11. Any factors that may have compromised the quality of the data or validity of the results are described.	☒	☐
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	☒	☐
VII. REQUIRED SIGNATURES		
Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360A-0730 through 0750.		
Nathan Moxley, LHG		6/5/2024
Print or Type Name	Signature of Certified Site Assessor	Date

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	First Tank			Second Tank			Third Tank			Fourth Tank			Fifth Tank		
A Tank name	UST-15			UST-16			UST-17			UST-18			UST-19		
B Tank installation date	~ 1942			~ 1942			~ 1942			~ 1942			~ 1942		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~ 1942			~ 1942			~ 1942			~ 1942			~ 1942		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	D			D			D			D			D		
R Substance use	B			B			B			B			B		
S Compartment capacity	12,000			12,000			12,000			12,000			12,000		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	6th Tank			7th Tank			8th Tank			9th Tank			10th Tank		
A Tank name	UST-20			UST-21			UST-22			UST-26			UST-27		
B Tank installation date	~ 1942			~ 1942			~ 1942			~1975			~1975		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~ 1942			~ 1942			~ 1942			~1975			~1975		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	D			D			D			O			O		
R Substance use	B			B			B			G			G		
S Compartment capacity	12,000			12,000			12,000			13,500			13,500		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	11th Tank			12th Tank			13th Tank			14th Tank			15th Tank		
A Tank name	UST-28			UST-29			UST-30			UST-31			UST-32		
B Tank installation date	~1975			~1975			~1975			~1975			~1975		
D Tank material	A			A			A			A			A		
E1 Tank construction	A			A			A			A			A		
E2 Manifolded tank	A			A			A			A			A		
F Tank release detection	O			O			O			O			O		
H Tank corrosion protection	O			O			O			O			O		
I Spill prevention	O			O			O			O			O		
J Overfill protection	O			O			O			O			O		
K2 Piping Installation Date	~1975			~1975			~1975			~1975			~1975		
K1 Piping material	A			A			A			A			A		
L Piping construction	A			A			A			A			A		
M1 Piping release detection (primary)	O			O			O			O			O		
M2 Piping release detection (secondary)	J			J			J			J			J		
M3 Turbine sump construction	O			O			O			O			O		
O1 Piping corrosion protection	O			O			O			O			O		
O2 Steel flex connector at tank	J			J			J			J			J		
O3 Steel flex connector at dispenser/pump	J			J			J			J			J		
P Pumping system	O			O			O			O			O		
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	O			O			O			O			O		
R Substance use	G			G			G			G			G		
S Compartment capacity	13,500			13,500			13,500			13,500			13,500		

IV Individual tank information See pages 2 and 3 of the instructions for proper codes before completing this section.

	16th Tank			17th Tank			18th Tank			19th Tank			20th Tank		
A Tank name	UST-33			UST-34			UST-35								
B Tank installation date	~1975			~1975			~1975								
D Tank material	A			A			A								
E1 Tank construction	A			A			A								
E2 Manifolded tank	A			A			A								
F Tank release detection	O			O			O								
H Tank corrosion protection	O			O			O								
I Spill prevention	O			O			O								
J Overfill protection	O			O			O								
K2 Piping Installation Date	~1975			~1975			~1975								
K1 Piping material	A			A			A								
L Piping construction	A			A			A								
M1 Piping release detection (primary)	O			O			O								
M2 Piping release detection (secondary)	J			J			J								
M3 Turbine sump construction	O			O			O								
O1 Piping corrosion protection	O			O			O								
O2 Steel flex connector at tank	J			J			J								
O3 Steel flex connector at dispenser/pump	J			J			J								
P Pumping system	O			O			O								
Compartments	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Q Substance stored	O			O			O								
R Substance use	G			G			G								
S Compartment capacity	13,500			13,500			13,500								

Appendix C

Import Fill and Controlled Density Fill

Star Forge - Import Fill Sample Results Summary

all values reported in units of mg/kg

all values reported in units of mg/kg			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Compound			PCUL	background	FS-082223-01	FS-082223-02	FS-082223-03	FS-082523-01	FS-082523-02	FS-082523-03	FS-082523-04	FS-082523-05	FS-090123-01	FS-090123-02	FS-090123-03	FS-090123-04	FS-090123-05	FS-090123-05
PAHs	Naphthalene	0.0021			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	2-Methyl naphthalene	0.67			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	1-Methyl naphthalene	29			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Acenaphthylene	1.3			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Acenaphthene	0.028			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Fluorene	0.029			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Phenanthrene	1.5			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Anthracene	0.051			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Fluoranthene	0.09			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Pyrene	0.14			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(a)-anthracene	0.000057			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Chrysene	0.0064			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(b)-fluoranthene	0.0002			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(k)-fluoranthene	0.002			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(a)pyrene	0.000016			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Indeno(1,2,3-cd)-pyrene	0.00056			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Dibenz(a,h)-anthracene	0.000029			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(g,h,i)-perylene	0.67			0.0020 U	0.0020 U	0.0020 U	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.0015 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
TPH	GRO	30			2.5 U	2.3 U	2.5 U	2.6 U	3.0 U	3.0 U	3.0 U	2.9 U	2.4 U	2.2 U	2.4 U	2.5 U	1.2 U	2.3
	DRO	260			8.7 U	8.7 U	8.6 U	8.6 U	8.7 U	8.7 U	8.6 U	8.6 U	8.5 U	8.6 U	8.5 U	8.5 U	8.5 U	8.5
	ORO	2,000			17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17
VOCs	Benzene	0.00056			0.00047 U	0.00045 U	0.00047 U	0.00049 U	0.00056 U	0.00059 U	0.00054 U	0.00056 U	0.00047 U	0.00046 U	0.00045 U	0.00051 U	0.00049 U	0.00048
	Toluene	0.055			0.00093 U	0.00091 U	0.00095 U	0.00099 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U	0.00094 U	0.00091 U	0.00091 U	0.0010 U	0.00099 U	0.00096
	Ethylbenzene	0.015			0.00047 U	0.00045 U	0.00047 U	0.00049 U	0.00056 U	0.00059 U	0.00054 U	0.00056 U	0.00047 U	0.00046 U	0.00045 U	0.00051 U	0.00049 U	0.00048
PCBs	Total Xylenes	16,000			0.0019 U	0.0018 U	0.0019 U	0.0020 U	0.0022 U	0.0023 U	0.0022 U	0.0022 U	0.0019 U	0.0018 U	0.0018 U	0.0021 U	0.0020 U	0.0019
	Total PCBs	0.0000022			0.0042 U	0.0042 U	0.0041 U	0.0041 U	0.0042 U	0.0042 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041
Total Metals	Arsenic	7			2.5	3.2	3.2	2.3	2.4	2.4	2.5	2.3	2.6	2.1	2.5	2.7	2.0	2.6
	Cadmium	1			0.052 U	0.053 U	0.058	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051
	Chromium	48			16	20	18	12	16	15	20	17	13	11	13	14	7.7	13
	Cobalt	20			5.6	7.3	7.3	4.6	5.1	4.8	6	5	5.7	4.8	5.7	6.2	3.6	6.2
	Copper	36			17	19	19	11	12	11	16	13	15	13	15	17	10	16
	Lead	50			2.1	2.2	2.4	1.5	1.7	1.5	1.6	1.6	2.1	1.4	1.9	1.8	1.4	1.8
	Mercury	0.07			0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051
	Nickel	48			20	23	24	16	20	19	23	23	18	14	17	20	12	18
	Selenium	0.3			0.13 U	0.16	0.20	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.16	0.13 U	0.13
	Silver	0.016	0.6		0.052 U	0.068	0.057	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.079	0.051 U	0.051 U	0.051 U	0.051 U	0.051
	Vanadium	2	60		24	30	22	15	20	19	22	18	19	15	19	20	11	20
	Zinc	85			27	35	29	21	24	23	26	25	26	18	25	23	18	25

Notes:

1. Analytes are only shown for select compounds. See lab reports for more detail.
3. "U" denotes analyte not reported at a concentration greater than or equal to the given laboratory PQL
4. Preliminary cleanup levels cleanup levels as established in Washington State Department of Ecology Lower Duwamish Waterway Preliminary Cleanup Levels Workbook, Soil Summary page, "Preliminary Cleanup Levels for the Lower Duwamish Waterway" dated April 5, 2019
5. Total PCBs represents the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, and 1268. If all Aroclors are undetected, the total concentration is reported as less than the highest PQL of all Aroclors.
6. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington, a Washington State accredited environmental laboratory
 - Blue shading indicates a given concentration is greater than the PCUL, but less than natural background
 - Green shading indicates a given PQL is greater than the PCUL

Analytical Methods

PAHs by EPA Method 8270E & 8270E/SIM

GRO by Method NWTPH-Gx

DRO/ORO by Method NWTPH-Dx

VOCs by Method 8260D

PCBs by Method 8082A

Total metals by 6020B (all except Hg) and 7471B (Hg)

Abbreviations:

PCUL	Preliminary Cleanup Level
mg/kg	milligrams per kilogram
PAHs	Polycyclic Aromatic Hydrocarbons
TPH	total petroleum hydrocarbons
DRO	diesel-range organics
ORO	oil-range organics
GRO	gasoline-range organics
VOCs	volatile organic compounds
PCB	polychlorinated biphenyl
TPH	total petroleum hydrocarbons
PQL	Practical Quantitation Limit

Star Forge - Import Fill Sample Results Summary

all values reported in units of mg/kg

all values reported in units of mg/kg				15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Compound		PCUL	background	3-06	FS-090123-07	FS-090123-08	FS-090123-09	FS-090123-10	FS-091123-01	FS-091123-02	FS-091123-03	FS-091123-04	FS-091123-05	FS-091123-06	FS-091123-07	FS-091123-08	FS-091123-09	FS-09262
PAHs	Naphthalene	0.0021		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	2-Methyl naphthalene	0.67		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	1-Methyl naphthalene	29		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Acenaphthylene	1.3		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Acenaphthene	0.028		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Fluorene	0.029		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Phenanthrene	1.5		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Anthracene	0.051		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Fluoranthene	0.09		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Pyrene	0.14		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(a)-anthracene	0.000057		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Chrysene	0.0064		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(b)-fluoranthene	0.0002		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(k)-fluoranthene	0.002		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(a)pyrene	0.000016		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Indeno(1,2,3-cd)-pyrene	0.00056		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Dibenz(a,h)-anthracene	0.000029		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
	Benzo(g,h,i)-perylene	0.67		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020
TPH	GRO	30		U	2.5 U	2.5 U	2.6 U	2.6 U	2.6 U	2.7 U	3.0 U	2.7 U	2.6 U	2.9 U	2.1 U	2.9 U	2.5 U	2.7
	DRO	260		U	8.5 U	8.5 U	8.5 U	8.5 U	8.6 U	8.6 U	8.6 U	8.5 U	8.4 U	8.7 U	8.6 U	8.6 U	8.6 U	8.7
	ORO	2,000		U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	18	17 U	17 U	17 U	17
VOCs	Benzene	0.00056		U	0.00054 U	0.00049 U	0.00043 U	0.00052 U	0.00054 U	0.00054 U	0.00047 U	0.00049 U	0.00053 U	0.00050 U	0.00051 U	0.00050 U	0.00050 U	0.00060
	Toluene	0.055		U	0.0011 U	0.00099 U	0.00085 U	0.0010 U	0.0011 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.0010 U	0.0010 U	0.0010 U	0.00099 U	0.0012
	Ethylbenzene	0.015		U	0.00054 U	0.00049 U	0.00043 U	0.00052 U	0.00054 U	0.00054 U	0.00047 U	0.00049 U	0.00053 U	0.00050 U	0.00051 U	0.00050 U	0.00050 U	0.00060
	Total Xylenes	16,000		U	0.0022 U	0.0020 U	0.0017 U	0.0021 U	0.0011 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.0010 U	0.0010 U	0.0010 U	0.00099 U	0.0012
PCBs	Total PCBs	0.000022		U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0041 U	0.0042 U	0.0042 U	0.0042 U	0.0042
Total Metals	Arsenic	7			2.3	2.3	2.0	2.1	1.7	1.6	1.3	2.4	1.8	2.2	1.7	1.9	2.0	1.8
	Cadmium	1		U	0.051 U	0.065	0.051 U	0.051 U	0.052 U	0.052 U	0.052 U	0.051 U	0.051 U	0.12	0.052 U	0.052 U	0.051 U	0.052
	Chromium	48			11	11	9.5	9.5	6.3	7.0	5.4	9.9	8.9	13	8.0	9.3	12	6.3
	Cobalt	20			5.1	5.3	4.8	4.8	3.4	3.6	2.8	4.8	3.7	4.6	4.3	4.2	4.2	3.8
	Copper	36			13	14	12	12	11	11	8.8	15	11	15	11	12	11	14
	Lead	50			1.6	2.3	1.4	1.6	1.2	1.2	0.93	1.8	1.4	2.1	1.7	1.6	1.5	1.4
	Mercury	0.07		U	0.051 U	0.051 U	0.051 U	0.051 U	0.052 U	0.052 U	0.052 U	0.051 U	0.051 U	0.052 U	0.052 U	0.052 U	0.051 U	0.052
	Nickel	48			16	17	15	14	9.3	11	7.3	12	12	13	10	12	12	8.7
	Selenium	0.3		U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.15	0.13 U	0.13 U	0.13 U	0.13
	Silver	0.016		0.6 U	0.11	0.057	0.051 U	0.051 U	0.052 U	0.052 U	0.052 U	0.051 U	0.051 U	0.071	0.052 U	0.052 U	0.051 U	0.052
	Vanadium	2		60	18	16	14	17	8.5	11	8.7	17	14	16	13	16	13	12
	Zinc	85			22	22	20	19	13	15	11	20	16	19	16	18	18	15

Notes:

1. Analytes are only shown for select compounds. See lab reports for more d
3. "U" denotes analyte not reported at a concentration greater than or equal
4. Preliminary cleanup levels cleanup levels as established in Washington Stat
Cleanup Levels Workbook, Soil Summary page, "Preliminary Cleanup Leve
5. Total PCBs represents the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 12
the total concentration is reported as less than the highest PQL of all Aroc
6. Samples analyzed by Onsite Environmental, Inc., of Redmond Washington,
Blue shading indicates a given concentration is greater than the PCUL
Green shading indicates a given PQL is greater than the PCUL

Analytical Methods

PAHs by EPA Method 8270E & 8270E/SIM

GRO by Method NWTPH-Gx

DRO/ORO by Method NWTPH-Dx

VOCs by Method 8260D

PCBs by Method 8082A

Total metals by 6020B (all except Hg) and 7471B (Hg)

Abbreviations:

PCUL Preliminary Cleanup Level
mg/kg milligrams per kilogram
PAHs Polycyclic Aromatic Hydrocarbons
TPH total petroleum hydrocarbons
DRO diesel-range organics
ORO oil-range organics
GRO gasoline-range organics
VOCs volatile organic compounds
PCB polychlorinated biphenyl
TPH total petroleum hydrocarbons
PQL Practical Quantitation Limit

Star Forge - Import Fill Sample Results Summary

all values reported in units of mg/kg

all values reported in units of mg/kg				29	30	31	32	33	34	35	36	37	38	39	40	41	
Compound		PCUL	background	β-01	FS-092623-02	FS-092623-03	FS-092623-04	FS-092623-05	FS-092623-06	FS-092623-07	FS-092623-08	FS-092623-09	FS-092623-10	FS-010824-01	FS-010824-02	FS-010824-03	FS-010824-04
PAHs	Naphthalene	0.0021		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	2-Methyl naphthalene	0.67		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	1-Methyl naphthalene	29		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Acenaphthylene	1.3		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Acenaphthene	0.028		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Fluorene	0.029		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Phenanthrene	1.5		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Anthracene	0.051		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Fluoranthene	0.09		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Pyrene	0.14		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(a)-anthracene	0.000057		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Chrysene	0.0064		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(b)-fluoranthene	0.0002		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(k)-fluoranthene	0.002		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(a)pyrene	0.000016		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Indeno(1,2,3-cd)-pyrene	0.00056		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Dibenz(a,h)-anthracene	0.000029		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(g,h,i)-perylene	0.67		U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
TPH	GRO	30		U	3.1 U	3.1 U	2.8 U	2.7 U	3.0 U	2.8 U	2.8 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U	2.8 U
	DRO	260		U	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U	8.6 U	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U
	ORO	2,000		U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	18 U	18 U	17 U	17 U	17 U	17 U
VOCs	Benzene	0.00056		U	0.00061 U	0.00052 U	0.00057 U	0.00065 U	0.00051 U	0.00059 U	0.00069 U	0.00054 U	0.00049 U	0.00060 U	0.00061 U	0.00052 U	0.00057 U
	Toluene	0.055		U	0.0012 U	0.0010 U	0.0011 U	0.0013 U	0.0010 U	0.0012 U	0.0014 U	0.0011 U	0.00099 U	0.0012 U	0.0012 U	0.0010 U	0.0011 U
	Ethylbenzene	0.015		U	0.00061 U	0.00052 U	0.00057 U	0.00065 U	0.00051 U	0.00059 U	0.00069 U	0.00054 U	0.00049 U	0.00060 U	0.00061 U	0.00052 U	0.00057 U
PCBs	Total Xylenes	16,000		U	0.0012 U	0.0010 U	0.0011 U	0.0013 U	0.0010 U	0.0012 U	0.0014 U	0.0011 U	0.00099 U	0.0012 U	0.0012 U	0.0010 U	0.0011 U
	Total PCBs	0.0000022		U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U
Total Metals	Arsenic	7			2.6	2.3	1.9	1.5	2.4	2.4	2.2	2.3	2.4	1.8	2.6	2.3	1.9
	Cadmium	1		U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U
	Chromium	48			14	11.0	8.0	5.3	11	13	9.6	10	11	6.3	14	11.0	8.0
	Cobalt	20			5.8	5.1	4.3	3.0	5.0	4.9	4.8	5.0	5.2	3.8	5.8	5.1	4.3
	Copper	36			16	15	12	9.5	16	17	13	15	15	14	16	15	12
	Lead	50			1.7	1.7	1.5	1.4	1.8	1.7	1.8	1.5	1.8	1.4	1.7	1.7	1.5
	Mercury	0.07		U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U
	Nickel	48			16	14	11	8.3	14	14	13	13	15	8.7	16	14	11
	Selenium	0.3		U	0.14	0.13 U	0.13 U	0.13 U	0.18	0.13 U	0.13 U	0.14	0.14	0.13 U	0.14	0.13 U	0.13 U
	Silver	0.016		0.6 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U
	Vanadium	2		60	22	18	13	8.3	17	18	17	17	21	12	22	18	13
	Zinc	85			23	22	18	13	20	22	21	22	24	15	23	22	18

Notes:

- Analytes are only shown for select compounds. See lab reports for more d
- "U" denotes analyte not reported at a concentration greater than or equal
- Preliminary cleanup levels cleanup levels as established in Washington Stat Cleanup Levels Workbook, Soil Summary page, "Preliminary Cleanup Leve
- Total PCBs represents the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 12 the total concentration is reported as less than the highest PQL of all Aroc
- Samples analyzed by Onsite Environmental, Inc., of Redmond Washington, Blue shading indicates a given concentration is greater than the PCUL Green shading indicates a given PQL is greater than the PCUL

Analytical Methods

PAHs by EPA Method 8270E & 8270E/SIM

GRO by Method NWTPH-Gx

DRO/ORO by Method NWTPH-Dx

VOCs by Method 8260D

PCBs by Method 8082A

Total metals by 6020B (all except Hg) and 7471B (Hg)

Abbreviations:

PCUL Preliminary Cleanup Level
mg/kg milligrams per kilogram
PAHs Polycyclic Aromatic Hydrocarbons
TPH total petroleum hydrocarbons
DRO diesel-range organics
ORO oil-range organics
GRO gasoline-range organics
VOCs volatile organic compounds
PCB polychlorinated biphenyl
TPH total petroleum hydrocarbons
PQL Practical Quantitation Limit

Star Forge - Import Fill Sample Results Summary

all values reported in units of mg/kg

all values reported in units of mg/kg			42	43	44	45	46	47		
Compound			PCUL	background	FS-010824-05	FS-010824-06	FS-010824-07	FS-010824-08	FS-010824-09	FS-010824-10
PAHs	Naphthalene	0.0021		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	2-Methyl naphthalene	0.67		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	1-Methyl naphthalene	29		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Acenaphthylene	1.3		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Acenaphthene	0.028		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Fluorene	0.029		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Phenanthrene	1.5		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Anthracene	0.051		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Fluoranthene	0.09		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Pyrene	0.14		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(a)-anthracene	0.000057		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Chrysene	0.0064		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(b)-fluoranthene	0.0002		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(k)-fluoranthene	0.002		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(a)pyrene	0.000016		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Indeno(1,2,3-cd)-pyrene	0.00056		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Dibenz(a,h)-anthracene	0.000029		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
	Benzo(g,h,i)-perylene	0.67		0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
TPH	GRO	30		2.7 U	3.0 U	2.8 U	2.8 U	2.5 U	2.4 U	
	DRO	260		8.7 U	8.7 U	8.7 U	8.6 U	8.7 U	8.7 U	
	ORO	2,000		17 U	17 U	17 U	17 U	18 U	18 U	
VOCs	Benzene	0.00056		0.00065 U	0.00051 U	0.00059 U	0.00069 U	0.00054 U	0.00049 U	
	Toluene	0.055		0.0013 U	0.0010 U	0.0012 U	0.0014 U	0.0011 U	0.00099 U	
	Ethylbenzene	0.015		0.00065 U	0.00051 U	0.00059 U	0.00069 U	0.00054 U	0.00049 U	
PCBs	Total Xylenes	16,000		0.0013 U	0.0010 U	0.0012 U	0.0014 U	0.0011 U	0.00099 U	
	Total PCBs	0.0000022		0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	
Total Metals	Arsenic	7		1.5	2.4	2.4	2.2	2.3	2.4	
	Cadmium	1		0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	
	Chromium	48		5.3	11	13	9.6	10	11	
	Cobalt	20		3.0	5.0	4.9	4.8	5.0	5.2	
	Copper	36		9.5	16	17	13	15	15	
	Lead	50		1.4	1.8	1.7	1.8	1.5	1.8	
	Mercury	0.07		0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	
	Nickel	48		8.3	14	14	13	13	15	
	Selenium	0.3		0.13 U	0.18	0.13 U	0.13 U	0.14	0.14	
	Silver	0.016	0.6	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	0.052 U	
	Vanadium	2	60	8.3	17	18	17	17	21	
	Zinc	85		13	20	22	21	22	24	

Notes:

1. Analytes are only shown for select compounds. See lab reports for more details.
2. "U" denotes analyte not reported at a concentration greater than or equal to the PCUL.
3. Preliminary cleanup levels cleanup levels as established in Washington State Cleanup Levels Workbook, Soil Summary page, "Preliminary Cleanup Levels".
4. Total PCBs represents the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1261, 1262, 1268, 1270, 1271, 1276, 1281, 1282, 1284, 1285, 1287, 1288, 1291, 1292, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 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1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 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2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582,



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 30, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project WO-01
Laboratory Reference No. 2308-251

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a stylized flourish at the end.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
Samples Submitted: August 22, 2023
Laboratory Reference: 2308-251
Project: WO-01

Case Narrative

Samples were collected on August 22, 2023 and received by the laboratory on August 23, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270E/SIM Analysis

The Spike Blank had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
Gasoline	ND	2.5	NWTPH-Gx	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-126				
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Gasoline	ND	2.3	NWTPH-Gx	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-126				
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
Gasoline	ND	2.5	NWTPH-Gx	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				



Date of Report: August 30, 2023
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 Laboratory Reference: 2308-251
 Project: WO-01

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Gasoline	ND	2.5	NWTPH-Gx	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-251-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				84	88	65-126		



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
Diesel Range Organics	ND	8.7	NWTPH-Dx	8-24-23	8-24-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	71	50-150				
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Diesel Range Organics	ND	8.7	NWTPH-Dx	8-24-23	8-24-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	82	50-150				
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
Diesel Range Organics	ND	8.6	NWTPH-Dx	8-24-23	8-24-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	85	50-150				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Diesel Range Organics	ND	8.4	NWTPH-Dx	8-24-23	8-24-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	101	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-266-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				99	74	50-150		



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082223-01				
Laboratory ID:		08-251-01				
Dichlorodifluoromethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0071	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0019	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	99	71-130				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Dichlorodifluoromethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0045	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0069	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0045	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0045	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
(trans) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0018	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00045	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00091	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	93	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	104	71-130				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082223-03				
Laboratory ID:		08-251-03				
Dichlorodifluoromethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0072	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	



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Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0019	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00047	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	105	71-130				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Bromomethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Chloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Acetone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Iodomethane	ND	0.0076	EPA 8260D	8-23-23	8-23-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
2-Butanone	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
Bromochloromethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Chloroform	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Benzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Trichloroethene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,2-Dichloropropane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Dibromomethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-23-23	8-23-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Toluene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	



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 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
2-Hexanone	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
Chlorobenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Ethylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-23-23	8-23-23	
o-Xylene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Styrene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromoform	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Bromobenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichloropropane	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	8-23-23	8-23-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Naphthalene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-23-23	8-23-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	75-130				
Toluene-d8	101	78-128				
4-Bromofluorobenzene	96	71-130				



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Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0370	0.0500	0.0500	75	74	30-160	1	26	
Chloromethane	0.0410	0.0429	0.0500	0.0500	82	86	59-131	5	26	
Vinyl Chloride	0.0440	0.0473	0.0500	0.0500	88	95	68-136	7	23	
Bromomethane	0.0420	0.0476	0.0500	0.0500	84	95	48-155	13	32	
Chloroethane	0.0458	0.0506	0.0500	0.0500	92	101	67-141	10	16	
Trichlorofluoromethane	0.0513	0.0575	0.0500	0.0500	103	115	76-127	11	19	
1,1-Dichloroethene	0.0489	0.0544	0.0500	0.0500	98	109	75-129	11	19	
Acetone	0.0572	0.0568	0.0500	0.0500	114	114	49-158	1	37	
Iodomethane	0.0328	0.0389	0.0500	0.0500	66	78	37-140	17	27	
Carbon Disulfide	0.0415	0.0452	0.0500	0.0500	83	90	41-143	9	19	
Methylene Chloride	0.0467	0.0525	0.0500	0.0500	93	105	60-124	12	18	
(trans) 1,2-Dichloroethene	0.0489	0.0538	0.0500	0.0500	98	108	79-133	10	15	
Methyl t-Butyl Ether	0.0498	0.0526	0.0500	0.0500	100	105	73-125	5	17	
1,1-Dichloroethane	0.0491	0.0541	0.0500	0.0500	98	108	79-125	10	17	
Vinyl Acetate	0.0538	0.0552	0.0500	0.0500	108	110	51-145	3	41	
2,2-Dichloropropane	0.0532	0.0532	0.0500	0.0500	106	106	79-126	0	18	
(cis) 1,2-Dichloroethene	0.0523	0.0574	0.0500	0.0500	105	115	75-131	9	15	
2-Butanone	0.0567	0.0572	0.0500	0.0500	113	114	54-145	1	32	
Bromochloromethane	0.0496	0.0552	0.0500	0.0500	99	110	80-126	11	15	
Chloroform	0.0488	0.0525	0.0500	0.0500	98	105	80-123	7	15	
1,1,1-Trichloroethane	0.0466	0.0523	0.0500	0.0500	93	105	78-124	12	21	
Carbon Tetrachloride	0.0419	0.0473	0.0500	0.0500	84	95	74-127	12	18	
1,1-Dichloropropene	0.0445	0.0516	0.0500	0.0500	89	103	80-123	15	15	
Benzene	0.0476	0.0520	0.0500	0.0500	95	104	80-122	9	18	
1,2-Dichloroethane	0.0494	0.0542	0.0500	0.0500	99	108	75-124	9	15	
Trichloroethene	0.0514	0.0521	0.0500	0.0500	103	104	80-129	1	18	
1,2-Dichloropropane	0.0539	0.0540	0.0500	0.0500	108	108	80-123	0	15	
Dibromomethane	0.0499	0.0483	0.0500	0.0500	100	97	80-123	3	15	
Bromodichloromethane	0.0532	0.0533	0.0500	0.0500	106	107	80-129	0	15	
(cis) 1,3-Dichloropropene	0.0540	0.0541	0.0500	0.0500	108	108	80-130	0	15	
Methyl Isobutyl Ketone	0.0554	0.0518	0.0500	0.0500	111	104	63-137	7	27	
Toluene	0.0505	0.0497	0.0500	0.0500	101	99	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0546	0.0554	0.0500	0.0500	109	111	80-124	1	15	



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 Samples Submitted: August 22, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery	RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB0823S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0480	0.0480	0.0500	0.0500	96	96	80-120	0	15	
Tetrachloroethene	0.0540	0.0547	0.0500	0.0500	108	109	77-126	1	15	
1,3-Dichloropropane	0.0529	0.0528	0.0500	0.0500	106	106	77-123	0	15	
2-Hexanone	0.0557	0.0517	0.0500	0.0500	111	103	53-137	7	29	
Dibromochloromethane	0.0548	0.0528	0.0500	0.0500	110	106	80-128	4	16	
1,2-Dibromoethane	0.0528	0.0514	0.0500	0.0500	106	103	80-122	3	20	
Chlorobenzene	0.0495	0.0509	0.0500	0.0500	99	102	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0504	0.0498	0.0500	0.0500	101	100	80-120	1	15	
Ethylbenzene	0.0510	0.0522	0.0500	0.0500	102	104	80-120	2	15	
m,p-Xylene	0.0990	0.102	0.100	0.100	99	102	80-120	3	15	
o-Xylene	0.0511	0.0525	0.0500	0.0500	102	105	80-120	3	15	
Styrene	0.0509	0.0531	0.0500	0.0500	102	106	80-122	4	15	
Bromoform	0.0538	0.0538	0.0500	0.0500	108	108	78-126	0	15	
Isopropylbenzene	0.0520	0.0540	0.0500	0.0500	104	108	80-125	4	15	
Bromobenzene	0.0494	0.0476	0.0500	0.0500	99	95	79-124	4	15	
1,1,2,2-Tetrachloroethane	0.0521	0.0493	0.0500	0.0500	104	99	75-122	6	17	
1,2,3-Trichloropropane	0.0502	0.0473	0.0500	0.0500	100	95	72-125	6	20	
n-Propylbenzene	0.0493	0.0492	0.0500	0.0500	99	98	77-126	0	16	
2-Chlorotoluene	0.0523	0.0508	0.0500	0.0500	105	102	75-128	3	15	
4-Chlorotoluene	0.0515	0.0507	0.0500	0.0500	103	101	78-127	2	16	
1,3,5-Trimethylbenzene	0.0502	0.0500	0.0500	0.0500	100	100	77-128	0	15	
tert-Butylbenzene	0.0502	0.0491	0.0500	0.0500	100	98	73-130	2	20	
1,2,4-Trimethylbenzene	0.0514	0.0499	0.0500	0.0500	103	100	77-125	3	16	
sec-Butylbenzene	0.0488	0.0472	0.0500	0.0500	98	94	75-130	3	17	
1,3-Dichlorobenzene	0.0519	0.0514	0.0500	0.0500	104	103	78-123	1	17	
p-Isopropyltoluene	0.0511	0.0513	0.0500	0.0500	102	103	75-130	0	18	
1,4-Dichlorobenzene	0.0520	0.0510	0.0500	0.0500	104	102	77-121	2	17	
1,2-Dichlorobenzene	0.0518	0.0511	0.0500	0.0500	104	102	80-120	1	15	
n-Butylbenzene	0.0532	0.0534	0.0500	0.0500	106	107	76-131	0	20	
1,2-Dibromo-3-chloropropane	0.0597	0.0523	0.0500	0.0500	119	105	61-137	13	28	
1,2,4-Trichlorobenzene	0.0582	0.0604	0.0500	0.0500	116	121	77-127	4	17	
Hexachlorobutadiene	0.0514	0.0512	0.0500	0.0500	103	102	77-125	0	22	
Naphthalene	0.0552	0.0519	0.0500	0.0500	110	104	68-129	6	19	
1,2,3-Trichlorobenzene	0.0527	0.0548	0.0500	0.0500	105	110	77-124	4	19	
Surrogate:										
Dibromofluoromethane					92	102	75-130			
Toluene-d8					100	99	78-128			
4-Bromofluorobenzene					107	107	71-130			



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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Pyridine	ND	0.21	EPA 8270E	8-24-23	8-24-23	
Phenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Aniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Benzyl alcohol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachloroethane	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Isophorone	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Hexachlorocyclopentadiene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
2,4-Dinitrophenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Pentachlorophenol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Carbazole	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Di-n-butylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	85	11 - 111				
Phenol-d6	90	26 - 117				
Nitrobenzene-d5	82	31 - 111				
2-Fluorobiphenyl	97	38 - 109				
2,4,6-Tribromophenol	89	27 - 127				
Terphenyl-d14	95	37 - 116				



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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Pyridine	ND	0.21	EPA 8270E	8-24-23	8-24-23	
Phenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Aniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Benzyl alcohol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachloroethane	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Isophorone	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Hexachlorocyclopentadiene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
2,4-Dinitrophenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Pentachlorophenol	ND	0.042	EPA 8270E	8-24-23	8-24-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Carbazole	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Di-n-butylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	78	11 - 111				
Phenol-d6	82	26 - 117				
Nitrobenzene-d5	78	31 - 111				
2-Fluorobiphenyl	82	38 - 109				
2,4,6-Tribromophenol	91	27 - 127				
Terphenyl-d14	91	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Pyridine	ND	0.21	EPA 8270E	8-24-23	8-24-23	
Phenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Aniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Benzyl alcohol	ND	0.041	EPA 8270E	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-24-23	8-24-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachloroethane	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Isophorone	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Hexachlorocyclopentadiene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
2,4-Dinitrophenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-24-23	8-24-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Pentachlorophenol	ND	0.041	EPA 8270E	8-24-23	8-24-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Carbazole	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Di-n-butylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	78	11 - 111				
Phenol-d6	78	26 - 117				
Nitrobenzene-d5	79	31 - 111				
2-Fluorobiphenyl	88	38 - 109				
2,4,6-Tribromophenol	84	27 - 127				
Terphenyl-d14	85	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Pyridine	ND	0.20	EPA 8270E	8-24-23	8-24-23	
Phenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Aniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Chlorophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Benzyl alcohol	ND	0.040	EPA 8270E	8-24-23	8-24-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	8-24-23	8-24-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachloroethane	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Isophorone	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitrophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	8-24-23	8-24-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Hexachlorocyclopentadiene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2-Nitroaniline	ND	0.020	EPA 8270E	8-24-23	8-24-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Dimethylphthalate	ND	0.020	EPA 8270E	8-24-23	8-24-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
3-Nitroaniline	ND	0.020	EPA 8270E	8-24-23	8-24-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
2,4-Dinitrophenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4-Nitrophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-24-23	8-24-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Diethylphthalate	ND	0.020	EPA 8270E	8-24-23	8-24-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
4-Nitroaniline	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-24-23	8-24-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-24-23	8-24-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	8-24-23	8-24-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Pentachlorophenol	ND	0.040	EPA 8270E	8-24-23	8-24-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Carbazole	ND	0.010	EPA 8270E	8-24-23	8-24-23	
Di-n-butylphthalate	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	8-24-23	8-24-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-24-23	8-24-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	8-24-23	8-24-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	80	11 - 111				
Phenol-d6	78	26 - 117				
Nitrobenzene-d5	80	31 - 111				
2-Fluorobiphenyl	89	38 - 109				
2,4,6-Tribromophenol	89	27 - 127				
Terphenyl-d14	88	37 - 116				



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Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.626	0.590	0.667	0.667	94	88	20 - 120	6	30	
Pyridine	0.322	0.301	0.667	0.667	48	45	20 - 120	7	30	
Phenol	0.638	0.615	0.667	0.667	96	92	49 - 109	4	23	
Aniline	0.680	0.628	0.667	0.667	102	94	20 - 120	8	30	
bis(2-Chloroethyl)ether	0.629	0.600	0.667	0.667	94	90	20 - 120	5	30	
2-Chlorophenol	0.625	0.619	0.667	0.667	94	93	52 - 105	1	26	
1,3-Dichlorobenzene	0.633	0.586	0.667	0.667	95	88	20 - 120	8	30	
1,4-Dichlorobenzene	0.625	0.601	0.667	0.667	94	90	51 - 102	4	28	
Benzyl alcohol	0.652	0.622	0.667	0.667	98	93	20 - 120	5	30	
1,2-Dichlorobenzene	0.622	0.619	0.667	0.667	93	93	20 - 120	0	30	
2-Methylphenol (o-Cresol)	0.646	0.640	0.667	0.667	97	96	20 - 120	1	30	
bis(2-Chloroisopropyl)ether	0.651	0.633	0.667	0.667	98	95	20 - 120	3	30	
(3+4)-Methylphenol (m,p-Cresol)	0.680	0.650	0.667	0.667	102	97	20 - 120	5	30	
n-Nitroso-di-n-propylamine	0.694	0.667	0.667	0.667	104	100	46 - 111	4	25	
Hexachloroethane	0.589	0.579	0.667	0.667	88	87	20 - 120	2	30	
Nitrobenzene	0.610	0.599	0.667	0.667	91	90	20 - 120	2	30	
Isophorone	0.635	0.595	0.667	0.667	95	89	20 - 120	7	30	
2-Nitrophenol	0.661	0.652	0.667	0.667	99	98	20 - 120	1	30	
2,4-Dimethylphenol	0.711	0.727	0.667	0.667	107	109	20 - 120	2	30	
bis(2-Chloroethoxy)methane	0.633	0.596	0.667	0.667	95	89	20 - 120	6	30	
2,4-Dichlorophenol	0.627	0.622	0.667	0.667	94	93	20 - 120	1	30	
1,2,4-Trichlorobenzene	0.620	0.605	0.667	0.667	93	91	52 - 106	2	28	
Naphthalene	0.593	0.620	0.667	0.667	89	93	20 - 120	4	30	
4-Chloroaniline	0.617	0.625	0.667	0.667	93	94	20 - 120	1	30	
Hexachlorobutadiene	0.599	0.606	0.667	0.667	90	91	20 - 120	1	30	
4-Chloro-3-methylphenol	0.631	0.632	0.667	0.667	95	95	54 - 112	0	20	
2-Methylnaphthalene	0.642	0.600	0.667	0.667	96	90	20 - 120	7	30	
1-Methylnaphthalene	0.628	0.628	0.667	0.667	94	94	20 - 120	0	30	
Hexachlorocyclopentadiene	0.695	0.654	0.667	0.667	104	98	20 - 120	6	30	
2,4,6-Trichlorophenol	0.670	0.638	0.667	0.667	100	96	20 - 120	5	30	
2,3-Dichloroaniline	0.656	0.612	0.667	0.667	98	92	20 - 120	7	30	
2,4,5-Trichlorophenol	0.690	0.639	0.667	0.667	103	96	20 - 120	8	30	
2-Chloronaphthalene	0.638	0.630	0.667	0.667	96	94	20 - 120	1	30	
2-Nitroaniline	0.684	0.620	0.667	0.667	103	93	20 - 120	10	30	
1,4-Dinitrobenzene	0.718	0.672	0.667	0.667	108	101	20 - 120	7	30	
Dimethylphthalate	0.688	0.641	0.667	0.667	103	96	20 - 120	7	30	
1,3-Dinitrobenzene	0.696	0.646	0.667	0.667	104	97	20 - 120	7	30	
2,6-Dinitrotoluene	0.697	0.637	0.667	0.667	104	96	20 - 120	9	30	
1,2-Dinitrobenzene	0.645	0.643	0.667	0.667	97	96	20 - 120	0	30	
Acenaphthylene	0.677	0.593	0.667	0.667	101	89	20 - 120	13	30	
3-Nitroaniline	0.702	0.641	0.667	0.667	105	96	20 - 120	9	30	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 22, 2023
 Laboratory Reference: 2308-251
 Project: WO-01

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.690	0.658	0.667	0.667	103	99	20 - 120	5	30	
Acenaphthene	0.660	0.617	0.667	0.667	99	93	55 - 101	7	20	
4-Nitrophenol	0.672	0.637	0.667	0.667	101	96	34 - 136	5	22	
2,4-Dinitrotoluene	0.627	0.642	0.667	0.667	94	96	51 - 111	2	21	
Dibenzofuran	0.669	0.634	0.667	0.667	100	95	20 - 120	5	30	
2,3,5,6-Tetrachlorophenol	0.595	0.549	0.667	0.667	89	82	20 - 120	8	30	
2,3,4,6-Tetrachlorophenol	0.603	0.585	0.667	0.667	90	88	20 - 120	3	30	
Diethylphthalate	0.697	0.648	0.667	0.667	104	97	20 - 120	7	30	
4-Chlorophenyl-phenylether	0.673	0.622	0.667	0.667	101	93	20 - 120	8	30	
4-Nitroaniline	0.672	0.619	0.667	0.667	101	93	20 - 120	8	30	
Fluorene	0.652	0.640	0.667	0.667	98	96	20 - 120	2	30	
4,6-Dinitro-2-methylphenol	0.720	0.696	0.667	0.667	108	104	20 - 120	3	30	
n-Nitrosodiphenylamine	0.657	0.655	0.667	0.667	99	98	20 - 120	0	30	
1,2-Diphenylhydrazine	0.668	0.660	0.667	0.667	100	99	20 - 120	1	30	
4-Bromophenyl-phenylether	0.682	0.614	0.667	0.667	102	92	20 - 120	10	30	
Hexachlorobenzene	0.632	0.648	0.667	0.667	95	97	20 - 120	3	30	
Pentachlorophenol	0.653	0.622	0.667	0.667	98	93	34 - 134	5	23	
Phenanthrene	0.682	0.668	0.667	0.667	102	100	20 - 120	2	30	
Anthracene	0.722	0.685	0.667	0.667	108	103	20 - 120	5	30	
Carbazole	0.666	0.664	0.667	0.667	100	100	20 - 120	0	30	
Di-n-butylphthalate	0.669	0.628	0.667	0.667	100	94	20 - 120	6	30	
Fluoranthene	0.694	0.647	0.667	0.667	104	97	20 - 120	7	30	
Pyrene	0.671	0.689	0.667	0.667	101	103	53 - 113	3	20	
Butylbenzylphthalate	0.670	0.619	0.667	0.667	100	93	20 - 120	8	30	
bis-2-Ethylhexyladipate	0.642	0.679	0.667	0.667	96	102	20 - 120	6	30	
3,3'-Dichlorobenzidine	0.621	0.618	0.667	0.667	93	93	20 - 120	0	30	
Benzo[a]anthracene	0.634	0.667	0.667	0.667	95	100	20 - 120	5	30	
Chrysene	0.630	0.679	0.667	0.667	94	102	20 - 120	7	30	
bis(2-Ethylhexyl)phthalate	0.631	0.680	0.667	0.667	95	102	20 - 120	7	30	
Di-n-octylphthalate	0.669	0.690	0.667	0.667	100	103	20 - 120	3	30	
Benzo[b]fluoranthene	0.621	0.680	0.667	0.667	93	102	20 - 120	9	30	
Benzo(j,k)fluoranthene	0.650	0.657	0.667	0.667	97	99	20 - 120	1	30	
Benzo[a]pyrene	0.654	0.693	0.667	0.667	98	104	20 - 120	6	30	
Indeno[1,2,3-cd]pyrene	0.650	0.691	0.667	0.667	97	104	20 - 120	6	30	
Dibenz[a,h]anthracene	0.660	0.651	0.667	0.667	99	98	20 - 120	1	30	
Benzo[g,h,i]perylene	0.658	0.675	0.667	0.667	99	101	20 - 120	3	30	
Surrogate:										
2-Fluorophenol					100	92	11 - 111			
Phenol-d6					106	103	26 - 117			
Nitrobenzene-d5					95	94	31 - 111			
2-Fluorobiphenyl					111	104	38 - 109			Q
2,4,6-Tribromophenol					98	96	27 - 127			
Terphenyl-d14					100	106	37 - 116			



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 Laboratory Reference: 2308-251
 Project: WO-01

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-01					
Laboratory ID:	08-251-01					
Aroclor 1016	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1221	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1232	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1242	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1248	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1254	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1260	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1262	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1268	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	80	50-127				
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Aroclor 1016	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1221	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1232	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1242	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1248	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1254	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1260	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1262	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Aroclor 1268	ND	0.0042	EPA 8082A	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
Aroclor 1016	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1221	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1232	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1242	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1248	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1254	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1260	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1262	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Aroclor 1268	ND	0.0041	EPA 8082A	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	98	50-127				



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 Project: WO-01

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Aroclor 1016	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1221	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1232	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1242	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1248	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1254	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1260	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1262	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Aroclor 1268	ND	0.0040	EPA 8082A	8-24-23	8-24-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	100	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.397	0.424	0.500	0.500	N/A	79	85	55-119	7	34
Surrogate:										
DCB						82	88	50-127		



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 Laboratory Reference: 2308-251
 Project: WO-01

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-082223-01						
Laboratory ID: 08-251-01						
Arsenic	2.5	0.52	EPA 6020B	8-24-23	8-24-23	
Cadmium	ND	0.052	EPA 6020B	8-24-23	8-24-23	
Chromium	16	1.0	EPA 6020B	8-24-23	8-24-23	
Cobalt	5.6	0.13	EPA 6020B	8-24-23	8-24-23	
Copper	17	1.0	EPA 6020B	8-24-23	8-24-23	
Lead	2.1	0.52	EPA 6020B	8-24-23	8-24-23	
Mercury	ND	0.052	EPA 7471B	8-23-23	8-23-23	
Nickel	20	1.0	EPA 6020B	8-24-23	8-24-23	
Selenium	ND	0.13	EPA 6020B	8-24-23	8-24-23	
Silver	ND	0.052	EPA 6020B	8-24-23	8-24-23	
Vanadium	24	1.0	EPA 6020B	8-24-23	8-24-23	
Zinc	27	1.0	EPA 6020B	8-24-23	8-24-23	

Client ID: FS-082223-02						
Laboratory ID: 08-251-02						
Arsenic	3.2	0.52	EPA 6020B	8-24-23	8-24-23	
Cadmium	0.053	0.052	EPA 6020B	8-24-23	8-24-23	
Chromium	20	0.52	EPA 6020B	8-24-23	8-24-23	
Cobalt	7.3	0.13	EPA 6020B	8-24-23	8-24-23	
Copper	19	0.52	EPA 6020B	8-24-23	8-24-23	
Lead	2.2	0.52	EPA 6020B	8-24-23	8-24-23	
Mercury	0.18	0.052	EPA 7471B	8-23-23	8-23-23	
Nickel	23	0.52	EPA 6020B	8-24-23	8-24-23	
Selenium	0.16	0.13	EPA 6020B	8-24-23	8-24-23	
Silver	0.068	0.052	EPA 6020B	8-24-23	8-24-23	
Vanadium	30	1.0	EPA 6020B	8-24-23	8-24-23	
Zinc	35	1.0	EPA 6020B	8-24-23	8-24-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-03					
Laboratory ID:	08-251-03					
Arsenic	3.2	0.52	EPA 6020B	8-24-23	8-24-23	
Cadmium	0.058	0.052	EPA 6020B	8-24-23	8-24-23	
Chromium	18	0.52	EPA 6020B	8-24-23	8-24-23	
Cobalt	7.3	0.13	EPA 6020B	8-24-23	8-24-23	
Copper	19	0.52	EPA 6020B	8-24-23	8-24-23	
Lead	2.4	0.52	EPA 6020B	8-24-23	8-24-23	
Mercury	ND	0.052	EPA 7471B	8-23-23	8-23-23	
Nickel	24	0.52	EPA 6020B	8-24-23	8-24-23	
Selenium	0.20	0.13	EPA 6020B	8-24-23	8-24-23	
Silver	0.057	0.052	EPA 6020B	8-24-23	8-24-23	
Vanadium	22	1.0	EPA 6020B	8-24-23	8-24-23	
Zinc	29	1.0	EPA 6020B	8-24-23	8-24-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824SM1					
Arsenic	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Cadmium	ND	0.0500	EPA 6020B	8-24-23	8-24-23	
Chromium	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Cobalt	ND	0.125	EPA 6020B	8-24-23	8-24-23	
Copper	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Lead	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Nickel	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Selenium	ND	0.125	EPA 6020B	8-24-23	8-24-23	
Silver	ND	0.0500	EPA 6020B	8-24-23	8-24-23	
Vanadium	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Zinc	ND	0.500	EPA 6020B	8-24-23	8-24-23	
Laboratory ID:	MB0823S1					
Mercury	ND	0.0500	EPA 7471B	8-23-23	8-23-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-251-01							
	ORIG	DUP						
Arsenic	2.39	2.28	NA	NA	NA	NA	5	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	15.6	14.6	NA	NA	NA	NA	7	20
Cobalt	5.35	5.05	NA	NA	NA	NA	6	20
Copper	16.7	15.5	NA	NA	NA	NA	7	20
Lead	1.97	1.68	NA	NA	NA	NA	16	20
Nickel	18.8	18.0	NA	NA	NA	NA	4	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Vanadium	23.3	21.5	NA	NA	NA	NA	8	20
Zinc	26.0	25.7	NA	NA	NA	NA	1	20

Laboratory ID: 08-218-01

Mercury	ND	ND	NA	NA	NA	NA	NA	20
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MATRIX SPIKES

Laboratory ID: 08-251-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	107	101	100	100	2.39	104	98	75-125	6	20
Cadmium	54.5	53.5	50.0	50.0	ND	109	107	75-125	2	20
Chromium	117	111	100	100	15.6	101	95	75-125	6	20
Cobalt	61.0	61.5	50.0	50.0	5.35	111	112	75-125	1	20
Copper	70.5	70.0	50.0	50.0	16.7	108	107	75-125	1	20
Lead	264	259	250	250	1.97	105	103	75-125	2	20
Nickel	128	128	100	100	18.8	109	109	75-125	0	20
Selenium	119	119	100	100	ND	119	119	75-125	0	20
Silver	24.5	24.5	25.0	25.0	ND	98	98	75-125	0	20
Vanadium	73.0	67.0	50.0	50.0	23.3	100	88	75-125	9	20
Zinc	136	130	100	100	26.0	110	104	75-125	4	20

Laboratory ID: 08-218-01

Mercury	0.507	0.509	0.500	0.500	0.0124	99	99	80-120	0	20
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**TOTAL MERCURY
 (Re-Analysis)
 EPA 7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	

Client ID:	FS-082223-02					
Laboratory ID:	08-251-02					
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	



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**TOTAL MERCURY
 (Re-Analysis)
 EPA 7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829S1					
Mercury	ND	0.0500	EPA 7471B	8-29-23	8-29-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-303-02							
	ORIG	DUP						
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-303-02									
	MS	MSD	MS	MSD		MS	MSD			
Mercury	0.508	0.513	0.500	0.500	0.0205	98	99	80-120	1	20



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-082223-01	08-251-01	4	8-23-23
FS-082223-02	08-251-02	4	8-23-23
FS-082223-03	08-251-03	3	8-23-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
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Company: **DH Environmental, Inc.**

Project Number:
WO-01

Project Name: Former Jorgensen Forge Facility - Import Fill

Project Manager:
David Hill

Sampled by:

Stacy Fox/Pave Jenkins

(Check One)

☐ Same Day

☒ 1 Day

☐ 2 Days

☐ 3 Days

☐ Standard (7 Days)

☒ Best Available

(attach)

Turnaround Request
(in working days)

Laboratory Number: 08-251

Chain of Custody

Page 1 of 1

Company: DH Environmental, Inc.				Turnaround Request (In Working Days)	
Project Number: WO-01				☐ Same Day ☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☒ Best Available (other)	
Project Name: Former Jorgensen Forge Facility - Import Fill					
Project Manager: David Hill					
Sampled by: Stacy Fox/Pave Jenkins					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FS-082223-01	8/22/23	1130	Soil	5
2	FS-082223-02	8/22/23	1135	Soil	5
3	FS-082223-03	8/22/23	1140	Soil	5
Laboratory Number: 08-251					
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)					
NWTPH-Gx					
NWTPH-Dx (SG Clean-up ☐)					
Volatiles 8260 8260C					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level)					
PCBs 8082 8082A					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
TOTAL METALS - SEE METALS LIST IN COMMENTS					
MERCURY - REANALYSIS					
% Moisture					

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		DH Environmental, Inc.	8/22/23	1635	Total Metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), vanadium (V), zinc (Zn) and cobalt (Co) by EPA Methods 200.8/6020. Please send results to: data@dhenviro.com; davehill@dhenviro.com; nathan.moxley@dhenviro.com (X) Added 8/25/23. DB (2 day TAT)
Received	Nicholas Flynn	OSE	8/22/23	1635	
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 30, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project WO-01-Fill Source Material
Laboratory Reference No. 2308-303

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 25, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
Samples Submitted: August 25, 2023
Laboratory Reference: 2308-303
Project: WO-01-Fill Source Material

Case Narrative

Samples were collected on August 25, 2023 and received by the laboratory on August 25, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270E/SIM Analysis

The RPD for 4-Chloro-3-methylphenol is outside the control limits for the Spike Blank/Spike Blank Duplicate. The percent recoveries on both spike blanks are within recovery limits. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
Gasoline	ND	2.6	NWTPH-Gx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	65-126				
Client ID:	FS-082523-02					
Laboratory ID:	08-303-02					
Gasoline	ND	3.0	NWTPH-Gx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				
Client ID:	FS-082523-03					
Laboratory ID:	08-303-03					
Gasoline	ND	3.0	NWTPH-Gx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	65-126				
Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
Gasoline	ND	3.0	NWTPH-Gx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				
Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
Gasoline	ND	2.9	NWTPH-Gx	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				



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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
Gasoline	ND	2.5	NWTPH-Gx	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-303-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				89	89	65-126		



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
Diesel Range Organics	ND	8.6	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				

Client ID:	FS-082523-02					
Laboratory ID:	08-303-02					
Diesel Range Organics	ND	8.7	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	FS-082523-03					
Laboratory ID:	08-303-03					
Diesel Range Organics	ND	8.7	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
Diesel Range Organics	ND	8.6	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				

Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
Diesel Range Organics	ND	8.6	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				



Date of Report: August 30, 2023
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 Project: WO-01-Fill Source Material

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829S2					
Diesel Range Organics	ND	8.3	NWTPH-Dx	8-29-23	8-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	97	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-298-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				71	66	50-150		



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
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 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
Dichlorodifluoromethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0049	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0076	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0015	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0049	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0049	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	



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 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00049	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260D	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	102	78-128				
4-Bromofluorobenzene	113	71-130				



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VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082523-02				
Laboratory ID:		08-303-02				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0086	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0017	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	



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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-02					
Laboratory ID:	08-303-02					
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0022	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	75-130				
Toluene-d8	104	78-128				
4-Bromofluorobenzene	104	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082523-03				
Laboratory ID:		08-303-03				
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0059	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0090	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0018	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0059	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0059	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-03					
Laboratory ID:	08-303-03					
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0023	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00059	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	100	75-130				
Toluene-d8	103	78-128				
4-Bromofluorobenzene	114	71-130				



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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082523-04				
Laboratory ID:		08-303-04				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0054	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0084	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0016	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0054	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0054	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	



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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0022	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00054	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	97	75-130				
Toluene-d8	102	78-128				
4-Bromofluorobenzene	98	71-130				



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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082523-05				
Laboratory ID:		08-303-05				
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0086	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0017	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0022	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00056	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	8-28-23	8-28-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	104	75-130				
Toluene-d8	103	78-128				
4-Bromofluorobenzene	91	71-130				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Chloromethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Bromomethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Chloroethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Acetone	ND	0.0050	EPA 8260D	8-28-23	8-28-23	
Iodomethane	ND	0.0077	EPA 8260D	8-28-23	8-28-23	
Carbon Disulfide	ND	0.0015	EPA 8260D	8-28-23	8-28-23	
Methylene Chloride	ND	0.0050	EPA 8260D	8-28-23	8-28-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
2-Butanone	ND	0.0050	EPA 8260D	8-28-23	8-28-23	
Bromochloromethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Chloroform	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Benzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Trichloroethene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,2-Dichloropropane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Dibromomethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	8-28-23	8-28-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Toluene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	



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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
2-Hexanone	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
Chlorobenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Ethylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
m,p-Xylene	ND	0.0020	EPA 8260D	8-28-23	8-28-23	
o-Xylene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Styrene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Bromoform	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Bromobenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichloropropane	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	8-28-23	8-28-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
Naphthalene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	8-28-23	8-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				



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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB0828S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0577	0.0573	0.0500	0.0500	115	115	30-160	1	26	
Chloromethane	0.0455	0.0462	0.0500	0.0500	91	92	59-131	2	26	
Vinyl Chloride	0.0478	0.0501	0.0500	0.0500	96	100	68-136	5	23	
Bromomethane	0.0416	0.0470	0.0500	0.0500	83	94	48-155	12	32	
Chloroethane	0.0480	0.0528	0.0500	0.0500	96	106	67-141	10	16	
Trichlorofluoromethane	0.0520	0.0570	0.0500	0.0500	104	114	76-127	9	19	
1,1-Dichloroethene	0.0500	0.0534	0.0500	0.0500	100	107	75-129	7	19	
Acetone	0.0506	0.0526	0.0500	0.0500	101	105	49-158	4	37	
Iodomethane	0.0323	0.0339	0.0500	0.0500	65	68	37-140	5	27	
Carbon Disulfide	0.0331	0.0329	0.0500	0.0500	66	66	41-143	1	19	
Methylene Chloride	0.0459	0.0512	0.0500	0.0500	92	102	60-124	11	18	
(trans) 1,2-Dichloroethene	0.0486	0.0532	0.0500	0.0500	97	106	79-133	9	15	
Methyl t-Butyl Ether	0.0486	0.0513	0.0500	0.0500	97	103	73-125	5	17	
1,1-Dichloroethane	0.0488	0.0532	0.0500	0.0500	98	106	79-125	9	17	
Vinyl Acetate	0.0479	0.0484	0.0500	0.0500	96	97	51-145	1	41	
2,2-Dichloropropane	0.0537	0.0589	0.0500	0.0500	107	118	79-126	9	18	
(cis) 1,2-Dichloroethene	0.0530	0.0551	0.0500	0.0500	106	110	75-131	4	15	
2-Butanone	0.0504	0.0535	0.0500	0.0500	101	107	54-145	6	32	
Bromochloromethane	0.0523	0.0547	0.0500	0.0500	105	109	80-126	4	15	
Chloroform	0.0483	0.0524	0.0500	0.0500	97	105	80-123	8	15	
1,1,1-Trichloroethane	0.0461	0.0504	0.0500	0.0500	92	101	78-124	9	21	
Carbon Tetrachloride	0.0448	0.0454	0.0500	0.0500	90	91	74-127	1	18	
1,1-Dichloropropene	0.0422	0.0474	0.0500	0.0500	84	95	80-123	12	15	
Benzene	0.0484	0.0512	0.0500	0.0500	97	102	80-122	6	18	
1,2-Dichloroethane	0.0494	0.0545	0.0500	0.0500	99	109	75-124	10	15	
Trichloroethene	0.0533	0.0570	0.0500	0.0500	107	114	80-129	7	18	
1,2-Dichloropropane	0.0548	0.0561	0.0500	0.0500	110	112	80-123	2	15	
Dibromomethane	0.0519	0.0519	0.0500	0.0500	104	104	80-123	0	15	
Bromodichloromethane	0.0551	0.0571	0.0500	0.0500	110	114	80-129	4	15	
(cis) 1,3-Dichloropropene	0.0558	0.0571	0.0500	0.0500	112	114	80-130	2	15	
Methyl Isobutyl Ketone	0.0503	0.0503	0.0500	0.0500	101	101	63-137	0	27	
Toluene	0.0507	0.0527	0.0500	0.0500	101	105	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0545	0.0587	0.0500	0.0500	109	117	80-124	7	15	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0828S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0471	0.0484	0.0500	0.0500	94	97	80-120	3	15	
Tetrachloroethene	0.0547	0.0568	0.0500	0.0500	109	114	77-126	4	15	
1,3-Dichloropropane	0.0496	0.0524	0.0500	0.0500	99	105	77-123	5	15	
2-Hexanone	0.0557	0.0504	0.0500	0.0500	111	101	53-137	10	29	
Dibromochloromethane	0.0527	0.0558	0.0500	0.0500	105	112	80-128	6	16	
1,2-Dibromoethane	0.0488	0.0514	0.0500	0.0500	98	103	80-122	5	20	
Chlorobenzene	0.0506	0.0535	0.0500	0.0500	101	107	80-120	6	18	
1,1,1,2-Tetrachloroethane	0.0484	0.0513	0.0500	0.0500	97	103	80-120	6	15	
Ethylbenzene	0.0504	0.0541	0.0500	0.0500	101	108	80-120	7	15	
m,p-Xylene	0.0999	0.106	0.100	0.100	100	106	80-120	6	15	
o-Xylene	0.0503	0.0539	0.0500	0.0500	101	108	80-120	7	15	
Styrene	0.0513	0.0543	0.0500	0.0500	103	109	80-122	6	15	
Bromoform	0.0521	0.0542	0.0500	0.0500	104	108	78-126	4	15	
Isopropylbenzene	0.0517	0.0546	0.0500	0.0500	103	109	80-125	5	15	
Bromobenzene	0.0460	0.0521	0.0500	0.0500	92	104	79-124	12	15	
1,1,2,2-Tetrachloroethane	0.0472	0.0500	0.0500	0.0500	94	100	75-122	6	17	
1,2,3-Trichloropropane	0.0448	0.0490	0.0500	0.0500	90	98	72-125	9	20	
n-Propylbenzene	0.0479	0.0528	0.0500	0.0500	96	106	77-126	10	16	
2-Chlorotoluene	0.0503	0.0553	0.0500	0.0500	101	111	75-128	9	15	
4-Chlorotoluene	0.0491	0.0536	0.0500	0.0500	98	107	78-127	9	16	
1,3,5-Trimethylbenzene	0.0483	0.0538	0.0500	0.0500	97	108	77-128	11	15	
tert-Butylbenzene	0.0484	0.0535	0.0500	0.0500	97	107	73-130	10	20	
1,2,4-Trimethylbenzene	0.0492	0.0540	0.0500	0.0500	98	108	77-125	9	16	
sec-Butylbenzene	0.0465	0.0518	0.0500	0.0500	93	104	75-130	11	17	
1,3-Dichlorobenzene	0.0495	0.0549	0.0500	0.0500	99	110	78-123	10	17	
p-Isopropyltoluene	0.0502	0.0547	0.0500	0.0500	100	109	75-130	9	18	
1,4-Dichlorobenzene	0.0490	0.0545	0.0500	0.0500	98	109	77-121	11	17	
1,2-Dichlorobenzene	0.0493	0.0531	0.0500	0.0500	99	106	80-120	7	15	
n-Butylbenzene	0.0512	0.0578	0.0500	0.0500	102	116	76-131	12	20	
1,2-Dibromo-3-chloropropane	0.0528	0.0578	0.0500	0.0500	106	116	61-137	9	28	
1,2,4-Trichlorobenzene	0.0580	0.0631	0.0500	0.0500	116	126	77-127	8	17	
Hexachlorobutadiene	0.0501	0.0569	0.0500	0.0500	100	114	77-125	13	22	
Naphthalene	0.0512	0.0567	0.0500	0.0500	102	113	68-129	10	19	
1,2,3-Trichlorobenzene	0.0533	0.0589	0.0500	0.0500	107	118	77-124	10	19	
Surrogate:										
Dibromofluoromethane					93	95	75-130			
Toluene-d8					102	101	78-128			
4-Bromofluorobenzene					109	109	71-130			



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.21	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.027	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-01					
Laboratory ID:	08-303-01					
2,4-Dinitrophenol	ND	0.15	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	75	11 - 111				
Phenol-d6	78	26 - 117				
Nitrobenzene-d5	82	31 - 111				
2-Fluorobiphenyl	90	38 - 109				
2,4,6-Tribromophenol	77	27 - 127				
Terphenyl-d14	87	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-02					
Laboratory ID:	08-303-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.21	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.027	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-02					
Laboratory ID:	08-303-02					
2,4-Dinitrophenol	ND	0.15	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.042	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	81	11 - 111				
Phenol-d6	80	26 - 117				
Nitrobenzene-d5	77	31 - 111				
2-Fluorobiphenyl	87	38 - 109				
2,4,6-Tribromophenol	80	27 - 127				
Terphenyl-d14	91	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-03					
Laboratory ID:	08-303-03					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.21	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.027	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	



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Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-082523-03						
Laboratory ID: 08-303-03						
2,4-Dinitrophenol	ND	0.15	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.042	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.042	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	70	11 - 111				
Phenol-d6	65	26 - 117				
Nitrobenzene-d5	68	31 - 111				
2-Fluorobiphenyl	75	38 - 109				
2,4,6-Tribromophenol	68	27 - 127				
Terphenyl-d14	75	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.21	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.027	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
2,4-Dinitrophenol	ND	0.15	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0016	EPA 8270E/SIM	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	67	11 - 111				
Phenol-d6	70	26 - 117				
Nitrobenzene-d5	68	31 - 111				
2-Fluorobiphenyl	83	38 - 109				
2,4,6-Tribromophenol	82	27 - 127				
Terphenyl-d14	91	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.21	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.027	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
2,4-Dinitrophenol	ND	0.15	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.041	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	39	11 - 111				
Phenol-d6	46	26 - 117				
Nitrobenzene-d5	44	31 - 111				
2-Fluorobiphenyl	59	38 - 109				
2,4,6-Tribromophenol	67	27 - 127				
Terphenyl-d14	85	37 - 116				



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Pyridine	ND	0.20	EPA 8270E	8-28-23	8-29-23	
Phenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Aniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Chlorophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Benzyl alcohol	ND	0.040	EPA 8270E	8-28-23	8-29-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	8-28-23	8-29-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachloroethane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Nitrobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Isophorone	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitrophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	8-28-23	8-29-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Naphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Chloroaniline	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
1-Methylnaphthalene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Hexachlorocyclopentadiene	ND	0.026	EPA 8270E	8-28-23	8-29-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2-Nitroaniline	ND	0.020	EPA 8270E	8-28-23	8-29-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Dimethylphthalate	ND	0.020	EPA 8270E	8-28-23	8-29-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	8-28-23	8-29-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Acenaphthylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
3-Nitroaniline	ND	0.020	EPA 8270E	8-28-23	8-29-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
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**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	8-28-23	8-29-23	
Acenaphthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4-Nitrophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Dibenzofuran	ND	0.010	EPA 8270E	8-28-23	8-29-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Diethylphthalate	ND	0.020	EPA 8270E	8-28-23	8-29-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
4-Nitroaniline	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Fluorene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
4,6-Dinitro-2-methylphenol	ND	0.10	EPA 8270E	8-28-23	8-29-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	8-28-23	8-29-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	8-28-23	8-29-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Pentachlorophenol	ND	0.040	EPA 8270E	8-28-23	8-29-23	
Phenanthrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Carbazole	ND	0.010	EPA 8270E	8-28-23	8-29-23	
Di-n-butylphthalate	ND	0.040	EPA 8270E	8-28-23	8-29-23	
Fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	8-28-23	8-29-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Benzo[a]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Chrysene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	8-28-23	8-29-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	8-28-23	8-29-23	
Benzo[b]fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo(j,k)fluoranthene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[a]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Indeno[1,2,3-cd]pyrene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Dibenz[a,h]anthracene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
Benzo[g,h,i]perylene	ND	0.0015	EPA 8270E/SIM	8-28-23	8-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	80	11 - 111				
Phenol-d6	82	26 - 117				
Nitrobenzene-d5	84	31 - 111				
2-Fluorobiphenyl	99	38 - 109				
2,4,6-Tribromophenol	83	27 - 127				
Terphenyl-d14	93	37 - 116				



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SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL

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Matrix: Soil
 Units: mg/Kg

	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0828S1										
	SB	SBD	SB	SBD	SB	SBD					
n-Nitrosodimethylamine	0.447	0.520	0.667	0.667	67	78	20 - 120	15	30		
Pyridine	0.186	0.220	0.667	0.667	28	33	20 - 120	17	30		
Phenol	0.456	0.505	0.667	0.667	68	76	49 - 109	10	23		
Aniline	0.434	0.519	0.667	0.667	65	78	20 - 120	18	30		
bis(2-Chloroethyl)ether	0.480	0.540	0.667	0.667	72	81	20 - 120	12	30		
2-Chlorophenol	0.502	0.565	0.667	0.667	75	85	52 - 105	12	26		
1,3-Dichlorobenzene	0.505	0.545	0.667	0.667	76	82	20 - 120	8	30		
1,4-Dichlorobenzene	0.515	0.571	0.667	0.667	77	86	51 - 102	10	28		
Benzyl alcohol	0.512	0.592	0.667	0.667	77	89	20 - 120	14	30		
1,2-Dichlorobenzene	0.524	0.580	0.667	0.667	79	87	20 - 120	10	30		
2-Methylphenol (o-Cresol)	0.498	0.529	0.667	0.667	75	79	20 - 120	6	30		
bis(2-Chloroisopropyl)ether	0.467	0.511	0.667	0.667	70	77	20 - 120	9	30		
(3+4)-Methylphenol (m,p-Cresol)	0.502	0.540	0.667	0.667	75	81	20 - 120	7	30		
n-Nitroso-di-n-propylamine	0.495	0.566	0.667	0.667	74	85	46 - 111	13	25		
Hexachloroethane	0.474	0.552	0.667	0.667	71	83	20 - 120	15	30		
Nitrobenzene	0.486	0.588	0.667	0.667	73	88	20 - 120	19	30		
Isophorone	0.478	0.577	0.667	0.667	72	87	20 - 120	19	30		
2-Nitrophenol	0.503	0.596	0.667	0.667	75	89	20 - 120	17	30		
2,4-Dimethylphenol	0.576	0.677	0.667	0.667	86	101	20 - 120	16	30		
bis(2-Chloroethoxy)methane	0.495	0.544	0.667	0.667	74	82	20 - 120	9	30		
2,4-Dichlorophenol	0.494	0.580	0.667	0.667	74	87	20 - 120	16	30		
1,2,4-Trichlorobenzene	0.516	0.625	0.667	0.667	77	94	52 - 106	19	28		
Naphthalene	0.499	0.616	0.667	0.667	75	92	20 - 120	21	30		
4-Chloroaniline	0.455	0.597	0.667	0.667	68	90	20 - 120	27	30		
Hexachlorobutadiene	0.520	0.633	0.667	0.667	78	95	20 - 120	20	30		
4-Chloro-3-methylphenol	0.489	0.602	0.667	0.667	73	90	54 - 112	21	20	L	
2-Methylnaphthalene	0.527	0.623	0.667	0.667	79	93	20 - 120	17	30		
1-Methylnaphthalene	0.497	0.614	0.667	0.667	75	92	20 - 120	21	30		
Hexachlorocyclopentadiene	0.455	0.473	0.667	0.667	68	71	20 - 120	4	30		
2,4,6-Trichlorophenol	0.528	0.542	0.667	0.667	79	81	20 - 120	3	30		
2,3-Dichloroaniline	0.486	0.530	0.667	0.667	73	79	20 - 120	9	30		
2,4,5-Trichlorophenol	0.468	0.500	0.667	0.667	70	75	20 - 120	7	30		
2-Chloronaphthalene	0.551	0.558	0.667	0.667	83	84	20 - 120	1	30		
2-Nitroaniline	0.520	0.577	0.667	0.667	78	87	20 - 120	10	30		
1,4-Dinitrobenzene	0.598	0.653	0.667	0.667	90	98	20 - 120	9	30		
Dimethylphthalate	0.556	0.604	0.667	0.667	83	91	20 - 120	8	30		
1,3-Dinitrobenzene	0.563	0.614	0.667	0.667	84	92	20 - 120	9	30		
2,6-Dinitrotoluene	0.560	0.632	0.667	0.667	84	95	20 - 120	12	30		
1,2-Dinitrobenzene	0.550	0.631	0.667	0.667	82	95	20 - 120	14	30		
Acenaphthylene	0.557	0.604	0.667	0.667	84	91	20 - 120	8	30		
3-Nitroaniline	0.561	0.601	0.667	0.667	84	90	20 - 120	7	30		



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**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0828S1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.313	0.241	0.667	0.667	47	36	20 - 120	26	30	
Acenaphthene	0.543	0.566	0.667	0.667	81	85	55 - 101	4	20	
4-Nitrophenol	0.348	0.354	0.667	0.667	52	53	34 - 136	2	22	
2,4-Dinitrotoluene	0.523	0.618	0.667	0.667	78	93	51 - 111	17	21	
Dibenzofuran	0.537	0.601	0.667	0.667	81	90	20 - 120	11	30	
2,3,5,6-Tetrachlorophenol	0.393	0.423	0.667	0.667	59	63	20 - 120	7	30	
2,3,4,6-Tetrachlorophenol	0.472	0.499	0.667	0.667	71	75	20 - 120	6	30	
Diethylphthalate	0.580	0.629	0.667	0.667	87	94	20 - 120	8	30	
4-Chlorophenyl-phenylether	0.544	0.585	0.667	0.667	82	88	20 - 120	7	30	
4-Nitroaniline	0.517	0.596	0.667	0.667	78	89	20 - 120	14	30	
Fluorene	0.559	0.607	0.667	0.667	84	91	20 - 120	8	30	
4,6-Dinitro-2-methylphenol	0.473	0.457	0.667	0.667	71	69	20 - 120	3	30	
n-Nitrosodiphenylamine	0.551	0.627	0.667	0.667	83	94	20 - 120	13	30	
1,2-Diphenylhydrazine	0.545	0.593	0.667	0.667	82	89	20 - 120	8	30	
4-Bromophenyl-phenylether	0.559	0.641	0.667	0.667	84	96	20 - 120	14	30	
Hexachlorobenzene	0.556	0.609	0.667	0.667	83	91	20 - 120	9	30	
Pentachlorophenol	0.372	0.364	0.667	0.667	56	55	34 - 134	2	23	
Phenanthrene	0.565	0.634	0.667	0.667	85	95	20 - 120	12	30	
Anthracene	0.581	0.616	0.667	0.667	87	92	20 - 120	6	30	
Carbazole	0.531	0.580	0.667	0.667	80	87	20 - 120	9	30	
Di-n-butylphthalate	0.556	0.604	0.667	0.667	83	91	20 - 120	8	30	
Fluoranthene	0.572	0.637	0.667	0.667	86	96	20 - 120	11	30	
Pyrene	0.560	0.606	0.667	0.667	84	91	53 - 113	8	20	
Butylbenzylphthalate	0.566	0.601	0.667	0.667	85	90	20 - 120	6	30	
bis-2-Ethylhexyladipate	0.517	0.570	0.667	0.667	78	85	20 - 120	10	30	
3,3'-Dichlorobenzidine	0.481	0.535	0.667	0.667	72	80	20 - 120	11	30	
Benzo[a]anthracene	0.552	0.587	0.667	0.667	83	88	20 - 120	6	30	
Chrysene	0.540	0.588	0.667	0.667	81	88	20 - 120	9	30	
bis(2-Ethylhexyl)phthalate	0.543	0.566	0.667	0.667	81	85	20 - 120	4	30	
Di-n-octylphthalate	0.553	0.602	0.667	0.667	83	90	20 - 120	8	30	
Benzo[b]fluoranthene	0.533	0.621	0.667	0.667	80	93	20 - 120	15	30	
Benzo(j,k)fluoranthene	0.553	0.642	0.667	0.667	83	96	20 - 120	15	30	
Benzo[a]pyrene	0.551	0.645	0.667	0.667	83	97	20 - 120	16	30	
Indeno[1,2,3-cd]pyrene	0.554	0.598	0.667	0.667	83	90	20 - 120	8	30	
Dibenz[a,h]anthracene	0.542	0.608	0.667	0.667	81	91	20 - 120	11	30	
Benzo[g,h,i]perylene	0.519	0.610	0.667	0.667	78	91	20 - 120	16	30	
Surrogate:										
2-Fluorophenol					70	76	11 - 111			
Phenol-d6					74	78	26 - 117			
Nitrobenzene-d5					72	86	31 - 111			
2-Fluorobiphenyl					87	83	38 - 109			
2,4,6-Tribromophenol					79	84	27 - 127			
Terphenyl-d14					86	89	37 - 116			



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-082523-01						
Laboratory ID:	08-303-01					
Aroclor 1016	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	98	50-127				
Client ID: FS-082523-02						
Laboratory ID:	08-303-02					
Aroclor 1016	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				
Client ID: FS-082523-03						
Laboratory ID:	08-303-03					
Aroclor 1016	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	110	50-127				



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 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-082523-04					
Laboratory ID:	08-303-04					
Aroclor 1016	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	50-127				
Client ID:	FS-082523-05					
Laboratory ID:	08-303-05					
Aroclor 1016	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0041	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	109	50-127				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829S1					
Aroclor 1016	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1221	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1232	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1242	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1248	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1254	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1260	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1262	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Aroclor 1268	ND	0.0040	EPA 8082A	8-29-23	8-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	99	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0829S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.484	0.431	0.500	0.500	N/A	97	86	55-119	12	34	
Surrogate:											
DCB						106	97	50-127			



Date of Report: August 30, 2023
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 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-082523-01						
Laboratory ID: 08-303-01						
Arsenic	2.3	1.0	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Chromium	12	0.52	EPA 6020B	8-29-23	8-29-23	
Cobalt	4.6	0.13	EPA 6020B	8-29-23	8-29-23	
Copper	11	0.52	EPA 6020B	8-29-23	8-29-23	
Lead	1.5	0.52	EPA 6020B	8-29-23	8-29-23	
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	
Nickel	16	0.52	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.13	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Vanadium	15	1.0	EPA 6020B	8-29-23	8-29-23	
Zinc	21	1.0	EPA 6020B	8-29-23	8-29-23	

Client ID: FS-082523-02						
Laboratory ID: 08-303-02						
Arsenic	2.4	0.52	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Chromium	16	0.52	EPA 6020B	8-29-23	8-29-23	
Cobalt	5.1	0.13	EPA 6020B	8-29-23	8-29-23	
Copper	12	0.52	EPA 6020B	8-29-23	8-29-23	
Lead	1.7	0.52	EPA 6020B	8-29-23	8-29-23	
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	
Nickel	20	0.52	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.13	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Vanadium	20	0.52	EPA 6020B	8-29-23	8-29-23	
Zinc	24	0.52	EPA 6020B	8-29-23	8-29-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-082523-03						
Laboratory ID: 08-303-03						
Arsenic	2.4	0.52	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Chromium	15	0.52	EPA 6020B	8-29-23	8-29-23	
Cobalt	4.8	0.13	EPA 6020B	8-29-23	8-29-23	
Copper	11	0.52	EPA 6020B	8-29-23	8-29-23	
Lead	1.5	0.52	EPA 6020B	8-29-23	8-29-23	
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	
Nickel	19	0.52	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.13	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Vanadium	19	0.52	EPA 6020B	8-29-23	8-29-23	
Zinc	23	0.52	EPA 6020B	8-29-23	8-29-23	

Client ID: FS-082523-04						
Laboratory ID: 08-303-04						
Arsenic	2.5	0.52	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Chromium	20	0.52	EPA 6020B	8-29-23	8-29-23	
Cobalt	5.6	0.13	EPA 6020B	8-29-23	8-29-23	
Copper	16	0.52	EPA 6020B	8-29-23	8-29-23	
Lead	1.6	0.52	EPA 6020B	8-29-23	8-29-23	
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	
Nickel	23	0.52	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.13	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Vanadium	22	0.52	EPA 6020B	8-29-23	8-29-23	
Zinc	26	0.52	EPA 6020B	8-29-23	8-29-23	



Date of Report: August 30, 2023
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 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-082523-05				
Laboratory ID:		08-303-05				
Arsenic	2.3	0.52	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Chromium	17	0.52	EPA 6020B	8-29-23	8-29-23	
Cobalt	5.3	0.13	EPA 6020B	8-29-23	8-29-23	
Copper	13	0.52	EPA 6020B	8-29-23	8-29-23	
Lead	1.6	0.52	EPA 6020B	8-29-23	8-29-23	
Mercury	ND	0.052	EPA 7471B	8-29-23	8-29-23	
Nickel	23	0.52	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.13	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.052	EPA 6020B	8-29-23	8-29-23	
Vanadium	18	0.52	EPA 6020B	8-29-23	8-29-23	
Zinc	25	0.52	EPA 6020B	8-29-23	8-29-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829SM1					
Arsenic	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Cadmium	ND	0.0500	EPA 6020B	8-29-23	8-29-23	
Chromium	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Cobalt	ND	0.125	EPA 6020B	8-29-23	8-29-23	
Copper	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Lead	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Nickel	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Selenium	ND	0.125	EPA 6020B	8-29-23	8-29-23	
Silver	ND	0.0500	EPA 6020B	8-29-23	8-29-23	
Vanadium	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Zinc	ND	0.500	EPA 6020B	8-29-23	8-29-23	
Laboratory ID:	MB0829S1					
Mercury	ND	0.0500	EPA 7471B	8-29-23	8-29-23	



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-303-01							
	ORIG	DUP						
Arsenic	2.19	1.93	NA	NA	NA	NA	13	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	12.1	11.9	NA	NA	NA	NA	1	20
Cobalt	4.43	4.30	NA	NA	NA	NA	3	20
Copper	11.1	10.6	NA	NA	NA	NA	5	20
Lead	1.42	1.29	NA	NA	NA	NA	9	20
Nickel	15.3	14.5	NA	NA	NA	NA	6	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Vanadium	14.6	15.8	NA	NA	NA	NA	8	20
Zinc	20.5	20.2	NA	NA	NA	NA	2	20
Laboratory ID: 08-303-02								
Mercury	ND	ND	NA	NA	NA	NA	NA	20



Date of Report: August 30, 2023
 Samples Submitted: August 25, 2023
 Laboratory Reference: 2308-303
 Project: WO-01-Fill Source Material

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	08-303-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	100	101	100	100	2.19	98	99	75-125	1	20
Cadmium	52.0	53.5	50.0	50.0	ND	104	107	75-125	3	20
Chromium	104	110	100	100	12.1	92	97	75-125	5	20
Cobalt	58.5	59.5	50.0	50.0	4.43	108	110	75-125	2	20
Copper	63.0	65.5	50.0	50.0	11.1	104	109	75-125	4	20
Lead	261	266	250	250	1.42	104	106	75-125	2	20
Nickel	106	112	100	100	15.3	90	96	75-125	6	20
Selenium	107	111	100	100	ND	107	111	75-125	4	20
Silver	22.1	22.5	25.0	25.0	ND	88	90	75-125	2	20
Vanadium	60.0	65.0	50.0	50.0	14.6	91	101	75-125	8	20
Zinc	114	124	100	100	20.5	93	103	75-125	8	20
Laboratory ID: 08-303-02										
Mercury	0.508	0.513	0.500	0.500	0.0205	98	99	80-120	1	20



Date of Report: August 30, 2023
Samples Submitted: August 25, 2023
Laboratory Reference: 2308-303
Project: WO-01-Fill Source Material

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-082523-01	08-303-01	3	8-28-23
FS-082523-02	08-303-02	4	8-28-23
FS-082523-03	08-303-03	4	8-28-23
FS-082523-04	08-303-04	3	8-28-23
FS-082523-05	08-303-05	3	8-28-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Environmental Inc.

Analytical Laboratory Testing Services
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Chain of Custody

Page 1 of 1

Company: DH Environmental, Inc.

Project Number: WO-01 - Fill Source Material

Project Name: Former Jorgensen Forge Facility

Project Manager: David Hill

Sampled by: Stacy Fox, David Hill

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ Best Available
(other)

Lab ID Sample Identification

Date Sampled Time Sampled Matrix

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)

NWTPH-Gx

NWTPH-Dx (SG Clean-up ☐)

Volatiles 8260 8260C

Halogenated Volatiles 8260

EDB EPA 8011 (Waters Only)

Semivolatiles 8270/SIM
(with low-level PAHs)
PAHs 8270/SIM (low-level)

PCBs 8082 8082A

Organochlorine Pesticides 8081

Organophosphorus Pesticides 8270/SIM

Chlorinated Acid Herbicides 8151

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664

TOTAL METALS - SEE METALS LIST IN COMMENTS

% Moisture

Laboratory Number: 08-303

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

DH Environmental, Inc.

8/25/23

1647

Received

08E

8/25/23

1647

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Total Metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), vanadium (V), zinc (Zn) and cobalt (Co) by EPA Methods 200.8/6020.

Please send results to: data@dhenviro.com; davehill@dhenviro.com; nathan.moxley@dhenviro.com

Data Package: Standard ☒ Level III ☐ Level IV ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 6, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project WO-01 - Import Fill Sample
Laboratory Reference No. 2309-010

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 1, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
Samples Submitted: September 1, 2023
Laboratory Reference: 2309-010
Project: WO-01 - Import Fill Sample

Case Narrative

Samples were collected on September 1, 2023 and received by the laboratory on September 1, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for 1,1-Dichloropropene and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank and Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Semivolatiles EPA 8270E/SIM Analysis

The percent recovery for Pyridine, Phenol, 2-Chlorophenol, 1,4-Dichlorobenzene, n-Nitroso-di-n-propylamine, and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank (or Spike Blank Duplicate). The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
Gasoline	ND	2.4	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	65-126				
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
Gasoline	ND	2.2	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	65-126				
Client ID:	FS-090123-03					
Laboratory ID:	09-010-03					
Gasoline	ND	2.4	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	65-126				
Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
Gasoline	ND	2.5	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	65-126				
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
Gasoline	ND	1.2	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	65-126				



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Gasoline	ND	2.5	NWTPH-Gx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-010-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				88	86	65-126		



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	FS-090123-03					
Laboratory ID:	09-010-03					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
Diesel Range Organics	ND	8.3	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-012-04							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	U1,
Lube Oil	1470	1260	NA	NA	NA	15	40	
Surrogate:								
o-Terphenyl				77	80	50-150		



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-01				
Laboratory ID:		09-010-01				
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00063	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0060	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0047	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00063	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0094	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0019	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00047	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	84	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	96	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00061	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0046	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0046	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0046	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00061	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0091	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
(trans) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0018	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00046	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	83	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	81	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-03				
Laboratory ID:		09-010-03				
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00061	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0045	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0045	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0058	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0045	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00061	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0091	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-03				
Laboratory ID:		09-010-03				
(trans) 1,3-Dichloropropene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0018	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00045	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00091	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	85	75-130				
<i>Toluene-d8</i>	93	78-128				
<i>4-Bromofluorobenzene</i>	92	71-130				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-04				
Laboratory ID:		09-010-04				
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00069	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0051	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0051	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0066	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0051	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00069	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0021	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00051	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	88	75-130				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	95	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-05						
Laboratory ID: 09-010-05						
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00066	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0063	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0099	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	86	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	102	71-130				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00067	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00067	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0341	0.0327	0.0500	0.0500	68	65	30-160	4	26	
Chloromethane	0.0326	0.0317	0.0500	0.0500	65	63	59-131	3	26	
Vinyl Chloride	0.0371	0.0356	0.0500	0.0500	74	71	68-136	4	23	
Bromomethane	0.0366	0.0366	0.0500	0.0500	73	73	48-155	0	32	
Chloroethane	0.0416	0.0392	0.0500	0.0500	83	78	67-141	6	16	
Trichlorofluoromethane	0.0463	0.0437	0.0500	0.0500	93	87	76-127	6	19	
1,1-Dichloroethene	0.0430	0.0402	0.0500	0.0500	86	80	75-129	7	19	
Acetone	0.0473	0.0427	0.0500	0.0500	95	85	49-158	10	37	
Iodomethane	0.0424	0.0371	0.0500	0.0500	85	74	37-140	13	27	
Carbon Disulfide	0.0425	0.0377	0.0500	0.0500	85	75	41-143	12	19	
Methylene Chloride	0.0388	0.0386	0.0500	0.0500	78	77	60-124	1	18	
(trans) 1,2-Dichloroethene	0.0442	0.0408	0.0500	0.0500	88	82	79-133	8	15	
Methyl t-Butyl Ether	0.0426	0.0398	0.0500	0.0500	85	80	73-125	7	17	
1,1-Dichloroethane	0.0436	0.0412	0.0500	0.0500	87	82	79-125	6	17	
Vinyl Acetate	0.0470	0.0410	0.0500	0.0500	94	82	51-145	14	41	
2,2-Dichloropropane	0.0504	0.0465	0.0500	0.0500	101	93	79-126	8	18	
(cis) 1,2-Dichloroethene	0.0407	0.0436	0.0500	0.0500	81	87	75-131	7	15	
2-Butanone	0.0467	0.0391	0.0500	0.0500	93	78	54-145	18	32	
Bromochloromethane	0.0456	0.0445	0.0500	0.0500	91	89	80-126	2	15	
Chloroform	0.0436	0.0410	0.0500	0.0500	87	82	80-123	6	15	
1,1,1-Trichloroethane	0.0418	0.0389	0.0500	0.0500	84	78	78-124	7	21	
Carbon Tetrachloride	0.0401	0.0395	0.0500	0.0500	80	79	74-127	2	18	
1,1-Dichloropropene	0.0372	0.0368	0.0500	0.0500	74	74	80-123	1	15	I,I
Benzene	0.0435	0.0408	0.0500	0.0500	87	82	80-122	6	18	
1,2-Dichloroethane	0.0449	0.0413	0.0500	0.0500	90	83	75-124	8	15	
Trichloroethene	0.0514	0.0490	0.0500	0.0500	103	98	80-129	5	18	
1,2-Dichloropropane	0.0491	0.0472	0.0500	0.0500	98	94	80-123	4	15	
Dibromomethane	0.0462	0.0448	0.0500	0.0500	92	90	80-123	3	15	
Bromodichloromethane	0.0503	0.0480	0.0500	0.0500	101	96	80-129	5	15	
(cis) 1,3-Dichloropropene	0.0508	0.0486	0.0500	0.0500	102	97	80-130	4	15	
Methyl Isobutyl Ketone	0.0475	0.0432	0.0500	0.0500	95	86	63-137	9	27	
Toluene	0.0466	0.0449	0.0500	0.0500	93	90	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0568	0.0544	0.0500	0.0500	114	109	80-124	4	15	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0487	0.0467	0.0500	0.0500	97	93	80-120	4	15	
Tetrachloroethene	0.0595	0.0600	0.0500	0.0500	119	120	77-126	1	15	
1,3-Dichloropropane	0.0521	0.0517	0.0500	0.0500	104	103	77-123	1	15	
2-Hexanone	0.0498	0.0450	0.0500	0.0500	100	90	53-137	10	29	
Dibromochloromethane	0.0555	0.0531	0.0500	0.0500	111	106	80-128	4	16	
1,2-Dibromoethane	0.0536	0.0487	0.0500	0.0500	107	97	80-122	10	20	
Chlorobenzene	0.0534	0.0523	0.0500	0.0500	107	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0497	0.0500	0.0500	105	99	80-120	6	15	
Ethylbenzene	0.0539	0.0532	0.0500	0.0500	108	106	80-120	1	15	
m,p-Xylene	0.107	0.104	0.100	0.100	107	104	80-120	3	15	
o-Xylene	0.0541	0.0531	0.0500	0.0500	108	106	80-120	2	15	
Styrene	0.0550	0.0524	0.0500	0.0500	110	105	80-122	5	15	
Bromoform	0.0537	0.0517	0.0500	0.0500	107	103	78-126	4	15	
Isopropylbenzene	0.0549	0.0539	0.0500	0.0500	110	108	80-125	2	15	
Bromobenzene	0.0548	0.0555	0.0500	0.0500	110	111	79-124	1	15	
1,1,2,2-Tetrachloroethane	0.0536	0.0519	0.0500	0.0500	107	104	75-122	3	17	
1,2,3-Trichloropropane	0.0529	0.0508	0.0500	0.0500	106	102	72-125	4	20	
n-Propylbenzene	0.0570	0.0571	0.0500	0.0500	114	114	77-126	0	16	
2-Chlorotoluene	0.0614	0.0596	0.0500	0.0500	123	119	75-128	3	15	
4-Chlorotoluene	0.0590	0.0586	0.0500	0.0500	118	117	78-127	1	16	
1,3,5-Trimethylbenzene	0.0581	0.0571	0.0500	0.0500	116	114	77-128	2	15	
tert-Butylbenzene	0.0578	0.0575	0.0500	0.0500	116	115	73-130	1	20	
1,2,4-Trimethylbenzene	0.0586	0.0579	0.0500	0.0500	117	116	77-125	1	16	
sec-Butylbenzene	0.0563	0.0562	0.0500	0.0500	113	112	75-130	0	17	
1,3-Dichlorobenzene	0.0595	0.0590	0.0500	0.0500	119	118	78-123	1	17	
p-Isopropyltoluene	0.0599	0.0590	0.0500	0.0500	120	118	75-130	2	18	
1,4-Dichlorobenzene	0.0599	0.0587	0.0500	0.0500	120	117	77-121	2	17	
1,2-Dichlorobenzene	0.0569	0.0564	0.0500	0.0500	114	113	80-120	1	15	
n-Butylbenzene	0.0609	0.0590	0.0500	0.0500	122	118	76-131	3	20	
1,2-Dibromo-3-chloropropane	0.0610	0.0578	0.0500	0.0500	122	116	61-137	5	28	
1,2,4-Trichlorobenzene	0.0659	0.0661	0.0500	0.0500	132	132	77-127	0	17	I,I
Hexachlorobutadiene	0.0582	0.0601	0.0500	0.0500	116	120	77-125	3	22	
Naphthalene	0.0572	0.0563	0.0500	0.0500	114	113	68-129	2	19	
1,2,3-Trichlorobenzene	0.0592	0.0607	0.0500	0.0500	118	121	77-124	3	19	
Surrogate:										
Dibromofluoromethane					84	84	75-130			
Toluene-d8					92	94	78-128			
4-Bromofluorobenzene					100	103	71-130			



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-6-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroisopropyl)ether	ND	0.015	EPA 8270E	9-5-23	9-6-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-6-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-5-23	9-6-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	9-5-23	9-6-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Nitrophenol	ND	0.027	EPA 8270E	9-5-23	9-6-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Nitroaniline	ND	0.027	EPA 8270E	9-5-23	9-6-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4,6-Dinitro-2-methylphenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-6-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-5-23	9-6-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	74	11 - 111				
Phenol-d6	70	26 - 117				
Nitrobenzene-d5	71	31 - 111				
2-Fluorobiphenyl	81	38 - 109				
2,4,6-Tribromophenol	78	27 - 127				
Terphenyl-d14	83	37 - 116				



Date of Report: September 6, 2023
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SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Pyridine	ND	0.21	EPA 8270E	9-5-23	9-6-23	
Phenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroisopropyl)ether	ND	0.015	EPA 8270E	9-5-23	9-6-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-5-23	9-6-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	9-5-23	9-6-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Nitrophenol	ND	0.027	EPA 8270E	9-5-23	9-6-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Nitroaniline	ND	0.027	EPA 8270E	9-5-23	9-6-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4,6-Dinitro-2-methylphenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-5-23	9-6-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	68	11 - 111				
Phenol-d6	65	26 - 117				
Nitrobenzene-d5	70	31 - 111				
2-Fluorobiphenyl	81	38 - 109				
2,4,6-Tribromophenol	68	27 - 127				
Terphenyl-d14	69	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-03					
Laboratory ID:	09-010-03					
n-Nitrosodimethylamine	ND	0.026	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.087	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-03					
Laboratory ID:	09-010-03					
2,4-Dinitrophenol	ND	0.25	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.068	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.083	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	80	11 - 111				
Phenol-d6	81	26 - 117				
Nitrobenzene-d5	72	31 - 111				
2-Fluorobiphenyl	88	38 - 109				
2,4,6-Tribromophenol	79	27 - 127				
Terphenyl-d14	80	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
n-Nitrosodimethylamine	ND	0.026	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.087	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
2,4-Dinitrophenol	ND	0.25	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.068	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.083	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	67	11 - 111				
Phenol-d6	67	26 - 117				
Nitrobenzene-d5	71	31 - 111				
2-Fluorobiphenyl	88	38 - 109				
2,4,6-Tribromophenol	88	27 - 127				
Terphenyl-d14	89	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
n-Nitrosodimethylamine	ND	0.026	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.087	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
2,4-Dinitrophenol	ND	0.25	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.068	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.083	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	67	11 - 111				
Phenol-d6	65	26 - 117				
Nitrobenzene-d5	65	31 - 111				
2-Fluorobiphenyl	82	38 - 109				
2,4,6-Tribromophenol	79	27 - 127				
Terphenyl-d14	81	37 - 116				



Date of Report: September 6, 2023
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 Project: WO-01 - Import Fill Sample

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
n-Nitrosodimethylamine	ND	0.025	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.086	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



Date of Report: September 6, 2023
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 Project: WO-01 - Import Fill Sample

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
2,4-Dinitrophenol	ND	0.24	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.067	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.081	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	34	11 - 111				
Phenol-d6	34	26 - 117				
Nitrobenzene-d5	33	31 - 111				
2-Fluorobiphenyl	38	38 - 109				
2,4,6-Tribromophenol	37	27 - 127				
Terphenyl-d14	42	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL

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Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S2									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.274	0.263	0.667	0.667	41	39	20 - 120	4	30	
Pyridine	0.139	0.121	0.667	0.667	21	18	20 - 120	14	30	I
Phenol	0.325	0.292	0.667	0.667	49	44	49 - 109	11	23	I,I
Aniline	0.284	0.267	0.667	0.667	43	40	20 - 120	6	30	
bis(2-Chloroethyl)ether	0.311	0.286	0.667	0.667	47	43	20 - 120	8	30	
2-Chlorophenol	0.327	0.302	0.667	0.667	49	45	52 - 105	8	26	I,I
1,3-Dichlorobenzene	0.296	0.289	0.667	0.667	44	43	20 - 120	2	30	
1,4-Dichlorobenzene	0.312	0.279	0.667	0.667	47	42	51 - 102	11	28	I,I
Benzyl alcohol	0.375	0.338	0.667	0.667	56	51	20 - 120	10	30	
1,2-Dichlorobenzene	0.311	0.303	0.667	0.667	47	45	20 - 120	3	30	
2-Methylphenol (o-Cresol)	0.357	0.319	0.667	0.667	54	48	20 - 120	11	30	
bis(2-Chloroisopropyl)ether	0.242	0.203	0.667	0.667	36	30	20 - 120	18	30	
(3+4)-Methylphenol (m,p-Cresol)	0.381	0.345	0.667	0.667	57	52	20 - 120	10	30	
n-Nitroso-di-n-propylamine	0.327	0.298	0.667	0.667	49	45	46 - 111	9	25	I
Hexachloroethane	0.285	0.261	0.667	0.667	43	39	20 - 120	9	30	
Nitrobenzene	0.301	0.295	0.667	0.667	45	44	20 - 120	2	30	
Isophorone	0.352	0.350	0.667	0.667	53	52	20 - 120	1	30	
2-Nitrophenol	0.362	0.342	0.667	0.667	54	51	20 - 120	6	30	
2,4-Dimethylphenol	0.406	0.402	0.667	0.667	61	60	20 - 120	1	30	
bis(2-Chloroethoxy)methane	0.328	0.329	0.667	0.667	49	49	20 - 120	0	30	
2,4-Dichlorophenol	0.383	0.385	0.667	0.667	57	58	20 - 120	1	30	
1,2,4-Trichlorobenzene	0.336	0.329	0.667	0.667	50	49	52 - 106	2	28	I,I
Naphthalene	0.335	0.339	0.667	0.667	50	51	20 - 120	1	30	
4-Chloroaniline	0.344	0.344	0.667	0.667	52	52	20 - 120	0	30	
Hexachlorobutadiene	0.308	0.289	0.667	0.667	46	43	20 - 120	6	30	
4-Chloro-3-methylphenol	0.361	0.361	0.667	0.667	54	54	54 - 112	0	20	
2-Methylnaphthalene	0.371	0.379	0.667	0.667	56	57	20 - 120	2	30	
1-Methylnaphthalene	0.378	0.378	0.667	0.667	57	57	20 - 120	0	30	
Hexachlorocyclopentadiene	0.335	0.335	0.667	0.667	50	50	20 - 120	0	30	
2,4,6-Trichlorophenol	0.413	0.427	0.667	0.667	62	64	20 - 120	3	30	
2,3-Dichloroaniline	0.371	0.399	0.667	0.667	56	60	20 - 120	7	30	
2,4,5-Trichlorophenol	0.386	0.397	0.667	0.667	58	60	20 - 120	3	30	
2-Chloronaphthalene	0.395	0.374	0.667	0.667	59	56	20 - 120	5	30	
2-Nitroaniline	0.348	0.386	0.667	0.667	52	58	20 - 120	10	30	
1,4-Dinitrobenzene	0.453	0.450	0.667	0.667	68	67	20 - 120	1	30	
Dimethylphthalate	0.418	0.417	0.667	0.667	63	63	20 - 120	0	30	
1,3-Dinitrobenzene	0.428	0.458	0.667	0.667	64	69	20 - 120	7	30	
2,6-Dinitrotoluene	0.419	0.430	0.667	0.667	63	64	20 - 120	3	30	
1,2-Dinitrobenzene	0.395	0.444	0.667	0.667	59	67	20 - 120	12	30	
Acenaphthylene	0.397	0.425	0.667	0.667	60	64	20 - 120	7	30	
3-Nitroaniline	0.426	0.428	0.667	0.667	64	64	20 - 120	0	30	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S2									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.297	0.285	0.667	0.667	45	43	20 - 120	4	30	
Acenaphthene	0.386	0.394	0.667	0.667	58	59	55 - 101	2	20	
4-Nitrophenol	0.356	0.360	0.667	0.667	53	54	34 - 136	1	22	
2,4-Dinitrotoluene	0.424	0.407	0.667	0.667	64	61	51 - 111	4	21	
Dibenzofuran	0.421	0.418	0.667	0.667	63	63	20 - 120	1	30	
2,3,5,6-Tetrachlorophenol	0.377	0.356	0.667	0.667	57	53	20 - 120	6	30	
2,3,4,6-Tetrachlorophenol	0.402	0.416	0.667	0.667	60	62	20 - 120	3	30	
Diethylphthalate	0.428	0.440	0.667	0.667	64	66	20 - 120	3	30	
4-Chlorophenyl-phenylether	0.428	0.426	0.667	0.667	64	64	20 - 120	0	30	
4-Nitroaniline	0.371	0.395	0.667	0.667	56	59	20 - 120	6	30	
Fluorene	0.418	0.439	0.667	0.667	63	66	20 - 120	5	30	
4,6-Dinitro-2-methylphenol	0.315	0.333	0.667	0.667	47	50	20 - 120	6	30	
n-Nitrosodiphenylamine	0.419	0.400	0.667	0.667	63	60	20 - 120	5	30	
1,2-Diphenylhydrazine	0.398	0.414	0.667	0.667	60	62	20 - 120	4	30	
4-Bromophenyl-phenylether	0.407	0.427	0.667	0.667	61	64	20 - 120	5	30	
Hexachlorobenzene	0.418	0.434	0.667	0.667	63	65	20 - 120	4	30	
Pentachlorophenol	0.342	0.320	0.667	0.667	51	48	34 - 134	7	23	
Phenanthrene	0.423	0.421	0.667	0.667	63	63	20 - 120	0	30	
Anthracene	0.433	0.428	0.667	0.667	65	64	20 - 120	1	30	
Carbazole	0.405	0.408	0.667	0.667	61	61	20 - 120	1	30	
Di-n-butylphthalate	0.421	0.392	0.667	0.667	63	59	20 - 120	7	30	
Fluoranthene	0.435	0.432	0.667	0.667	65	65	20 - 120	1	30	
Pyrene	0.424	0.410	0.667	0.667	64	61	53 - 113	3	20	
Butylbenzylphthalate	0.394	0.399	0.667	0.667	59	60	20 - 120	1	30	
bis-2-Ethylhexyladipate	0.387	0.384	0.667	0.667	58	58	20 - 120	1	30	
3,3'-Dichlorobenzidine	0.396	0.380	0.667	0.667	59	57	20 - 120	4	30	
Benzo[a]anthracene	0.420	0.417	0.667	0.667	63	63	20 - 120	1	30	
Chrysene	0.417	0.402	0.667	0.667	63	60	20 - 120	4	30	
bis(2-Ethylhexyl)phthalate	0.406	0.395	0.667	0.667	61	59	20 - 120	3	30	
Di-n-octylphthalate	0.408	0.413	0.667	0.667	61	62	20 - 120	1	30	
Benzo[b]fluoranthene	0.439	0.406	0.667	0.667	66	61	20 - 120	8	30	
Benzo(j,k)fluoranthene	0.423	0.414	0.667	0.667	63	62	20 - 120	2	30	
Benzo[a]pyrene	0.437	0.428	0.667	0.667	66	64	20 - 120	2	30	
Indeno[1,2,3-cd]pyrene	0.427	0.425	0.667	0.667	64	64	20 - 120	0	30	
Dibenz[a,h]anthracene	0.429	0.429	0.667	0.667	64	64	20 - 120	0	30	
Benzo[g,h,i]perylene	0.425	0.415	0.667	0.667	64	62	20 - 120	2	30	
Surrogate:										
2-Fluorophenol					51	47	11 - 111			
Phenol-d6					56	50	26 - 117			
Nitrobenzene-d5					48	48	31 - 111			
2-Fluorobiphenyl					66	66	38 - 109			
2,4,6-Tribromophenol					66	71	27 - 127			
Terphenyl-d14					68	69	37 - 116			



Date of Report: September 6, 2023
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 Project: WO-01 - Import Fill Sample

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-01					
Laboratory ID:	09-010-01					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	95	50-127				
Client ID:	FS-090123-02					
Laboratory ID:	09-010-02					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	98	50-127				
Client ID:	FS-090123-03					
Laboratory ID:	09-010-03					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	50-127				



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-04					
Laboratory ID:	09-010-04					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	81	50-127				
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	50-127				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Aroclor 1016	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.439	0.438	0.500	0.500	N/A	88	88	55-119	0	34
Surrogate:										
DCB						86	82	50-127		



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 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-01						
Laboratory ID: 09-010-01						
Arsenic	2.6	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	13	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	5.7	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	15	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	2.1	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	18	2.6	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	0.079	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	19	2.6	EPA 6020B	9-5-23	9-5-23	
Zinc	26	2.6	EPA 6020B	9-5-23	9-5-23	

Client ID: FS-090123-02						
Laboratory ID: 09-010-02						
Arsenic	2.1	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	11	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	4.8	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	13	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.4	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	14	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	15	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	18	0.51	EPA 6020B	9-5-23	9-5-23	



Date of Report: September 6, 2023
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 Laboratory Reference: 2309-010
 Project: WO-01 - Import Fill Sample

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-03						
Laboratory ID: 09-010-03						
Arsenic	2.5	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	13	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	5.7	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	15	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.9	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	17	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	19	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	25	0.51	EPA 6020B	9-5-23	9-5-23	

Client ID: FS-090123-04						
Laboratory ID: 09-010-04						
Arsenic	2.7	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	14	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	6.2	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	17	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.8	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	20	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	0.16	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	20	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	23	1.0	EPA 6020B	9-5-23	9-5-23	



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 Project: WO-01 - Import Fill Sample

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-05					
Laboratory ID:	09-010-05					
Arsenic	2.0	0.51	EPA 6020B	9-5-23	9-6-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	7.7	0.51	EPA 6020B	9-5-23	9-6-23	
Cobalt	3.6	0.13	EPA 6020B	9-5-23	9-6-23	
Copper	10	0.51	EPA 6020B	9-5-23	9-6-23	
Lead	1.4	0.51	EPA 6020B	9-5-23	9-6-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	12	0.51	EPA 6020B	9-5-23	9-6-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	11	0.51	EPA 6020B	9-5-23	9-6-23	
Zinc	18	0.51	EPA 6020B	9-5-23	9-6-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905SM1					
Arsenic	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.0500	EPA 6020B	9-5-23	9-5-23	
Chromium	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Cobalt	ND	0.125	EPA 6020B	9-5-23	9-5-23	
Copper	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Lead	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Nickel	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.125	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.0500	EPA 6020B	9-5-23	9-5-23	
Vanadium	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Zinc	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Laboratory ID:	MB0905S1					
Mercury	ND	0.0500	EPA 7471B	9-5-23	9-5-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-010-01							
	ORIG	DUP						
Arsenic	2.55	2.34	NA	NA	NA	NA	9	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	12.9	11.2	NA	NA	NA	NA	14	20
Cobalt	5.58	5.30	NA	NA	NA	NA	5	20
Copper	14.9	13.6	NA	NA	NA	NA	9	20
Lead	2.01	1.85	NA	NA	NA	NA	8	20
Nickel	17.4	16.0	NA	NA	NA	NA	8	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	0.0770	ND	NA	NA	NA	NA	NA	20
Vanadium	18.3	16.0	NA	NA	NA	NA	13	20
Zinc	25.6	22.9	NA	NA	NA	NA	11	20

Laboratory ID: 08-358-03

Mercury	ND	ND	NA	NA	NA	NA	NA	20
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MATRIX SPIKES

Laboratory ID: 09-010-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	96.5	99.5	100	100	2.55	94	97	75-125	3	20
Cadmium	52.0	52.0	50.0	50.0	ND	104	104	75-125	0	20
Chromium	105	104	100	100	12.9	92	91	75-125	0	20
Cobalt	59.5	57.0	50.0	50.0	5.58	108	103	75-125	4	20
Copper	66.5	66.0	50.0	50.0	14.9	103	102	75-125	1	20
Lead	249	252	250	250	2.01	99	100	75-125	1	20
Nickel	120	120	100	100	17.4	103	103	75-125	0	20
Selenium	102	98.5	100	100	ND	102	99	75-125	3	20
Silver	45.8	45.5	50.0	50.0	0.0770	91	91	75-125	1	20
Vanadium	60.0	60.5	50.0	50.0	18.3	84	85	75-125	1	20
Zinc	123	122	100	100	25.6	97	96	75-125	1	20

Laboratory ID: 08-358-03

Mercury	0.515	0.514	0.500	0.500	0.0482	93	93	80-120	0	20
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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-090123-01	09-010-01	2	9-5-23
FS-090123-02	09-010-02	2	9-5-23
FS-090123-03	09-010-03	2	9-5-23
FS-090123-04	09-010-04	2	9-5-23
FS-090123-05	09-010-05	2	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





DH Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: DH Environmental, Inc.

Project Number:

WO-01-Import Fill Sampling

Project Name:

Former Jorgensen Forge Facility

Project Manager:

David Hill

Sampled by:

Travis Forslund

Lab ID

Sample Identification

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ Best Available

(other)

Date Sampled Time Sampled Monitor

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX (6021 ☐ 8260 ☐)

NWTPH-Gx

NWTPH-Dx (SG Clean-up ☐)

Volatiles 8260 8260C

Halogenated Volatiles 8260

EDB EPA 8011 (Waters Only)

Semivolatiles 8270/SIM
(with low-level PAHs)

PAHs 8270/SIM (low-level)

PCBs 8082 8082A

Organochlorine Pesticides 8081

Organophosphorus Pesticides 8270/SIM

Chlorinated Acid Herbicides 8151

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664

TOTAL METALS - SEE METALS LIST IN COMMENTS

% Moisture

Laboratory Number: 09-010

Lab ID	Sample Identification	Date Sampled	Time Sampled	Monitor	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (6021 ☐ 8260 ☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up ☐)	Volatiles 8260 8260C	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082 8082A	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	TOTAL METALS - SEE METALS LIST IN COMMENTS	% Moisture
1	FS-090123-01	9/1/23	1231	Soil	5			X	X	X			X		X									X
2	FS-090123-02	9/1/23	1235	Soil	5			X	X	X			X		X									X
3	FS-090123-03	9/1/23	1239	Soil	5			X	X	X			X		X									X
4	FS-090123-04	9/1/23	1243	Soil	5			X	X	X			X		X									X
5	FS-090123-05	9/1/23	1247	Soil	5			X	X	X			X		X									X

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

DH Environmental, Inc.

9/1/23

1455

Total Metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), vanadium (V), zinc (Zn) and cobalt (Co) by EPA Methods 200.8/6020.

Please send results to: data@dhenviro.com, davidhill@dhenviro.com, nathan.mokey@dhenviro.com

[Signature]

[Signature]

9/1/23

1455

[Signature]

[Signature]

9/1/23

1544

Reviewed/Date

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Data Package: Standard ☒ Level III ☐ Level IV ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 6, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project WO-01 - Import Fill Sampling
Laboratory Reference No. 2309-011

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 1, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
Samples Submitted: September 1, 2023
Laboratory Reference: 2309-011
Project: WO-01 - Import Fill Sampling

Case Narrative

Samples were collected on September 1, 2023 and received by the laboratory on September 1, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for 1,1-Dichloropropene and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank and Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Semivolatiles EPA 8270E/SIM Analysis

The percent recovery for Pyridine, Phenol, 2-Chlorophenol, 1,4-Dichlorobenzene, n-Nitroso-di-n-propylamine, and 1,2,4-Trichlorobenzene is outside the control limits in the Spike Blank (or Spike Blank Duplicate). The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
Gasoline	ND	2.3	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	65-126				
Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
Gasoline	ND	2.5	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	65-126				
Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
Gasoline	ND	2.5	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	65-126				
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
Gasoline	ND	2.6	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
Gasoline	ND	2.6	NWTPH-Gx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				



Date of Report: September 6, 2023
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**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Gasoline	ND	2.5	NWTPH-Gx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-010-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				88	86	65-126		



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				

Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				

Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
Diesel Range Organics	ND	8.3	NWTPH-Dx	9-5-23	9-5-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-012-04							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	U1,
Lube Oil	1470	1260	NA	NA	NA	15	40	
Surrogate:								
o-Terphenyl				77	80	50-150		



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-06				
Laboratory ID:		09-011-01				
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00064	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0048	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0048	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0061	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0048	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00064	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0096	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
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 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0019	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00048	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	109	71-130				



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Date of Report: September 6, 2023
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 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-07				
Laboratory ID:		09-011-02				
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0016	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00073	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0054	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0054	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0069	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0054	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00073	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0022	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00054	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	86	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	104	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-08						
Laboratory ID: 09-011-03						
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00066	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0063	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0049	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00066	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0099	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00049	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	86	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	95	71-130				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0013	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00057	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0012	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0043	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0043	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0055	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0043	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00057	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.0085	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
(trans) 1,3-Dichloropropene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0017	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00043	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.00085	EPA 8260D	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	86	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	95	71-130				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-090123-10				
Laboratory ID:		09-011-05				
Dichlorodifluoromethane	ND	0.0016	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0016	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00069	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0052	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0052	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0066	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0052	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00069	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0021	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00052	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	87	75-130				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	101	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Dichlorodifluoromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Chloromethane	ND	0.0015	EPA 8260D	9-5-23	9-5-23	
Vinyl Chloride	ND	0.00067	EPA 8260D	9-5-23	9-5-23	
Bromomethane	ND	0.0014	EPA 8260D	9-5-23	9-5-23	
Chloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Acetone	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Iodomethane	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methylene Chloride	ND	0.0064	EPA 8260D	9-5-23	9-5-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Vinyl Acetate	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Butanone	ND	0.0050	EPA 8260D	9-5-23	9-5-23	
Bromochloromethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Chloroform	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1-Dichloropropene	ND	0.00067	EPA 8260D	9-5-23	9-5-23	
Benzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dichloropropane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Dibromomethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Bromodichloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260D	9-5-23	9-5-23	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Toluene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	



Date of Report: September 6, 2023
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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Dibromochloromethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
m,p-Xylene	ND	0.0020	EPA 8260D	9-5-23	9-5-23	
o-Xylene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Styrene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromoform	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Isopropylbenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Bromobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,1,2,2-Tetrachloroethane	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-5-23	9-5-23	
1,2-Dibromo-3-chloropropane	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
Naphthalene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>86</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>71-130</i>				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0341	0.0327	0.0500	0.0500	68	65	30-160	4	26	
Chloromethane	0.0326	0.0317	0.0500	0.0500	65	63	59-131	3	26	
Vinyl Chloride	0.0371	0.0356	0.0500	0.0500	74	71	68-136	4	23	
Bromomethane	0.0366	0.0366	0.0500	0.0500	73	73	48-155	0	32	
Chloroethane	0.0416	0.0392	0.0500	0.0500	83	78	67-141	6	16	
Trichlorofluoromethane	0.0463	0.0437	0.0500	0.0500	93	87	76-127	6	19	
1,1-Dichloroethene	0.0430	0.0402	0.0500	0.0500	86	80	75-129	7	19	
Acetone	0.0473	0.0427	0.0500	0.0500	95	85	49-158	10	37	
Iodomethane	0.0424	0.0371	0.0500	0.0500	85	74	37-140	13	27	
Carbon Disulfide	0.0425	0.0377	0.0500	0.0500	85	75	41-143	12	19	
Methylene Chloride	0.0388	0.0386	0.0500	0.0500	78	77	60-124	1	18	
(trans) 1,2-Dichloroethene	0.0442	0.0408	0.0500	0.0500	88	82	79-133	8	15	
Methyl t-Butyl Ether	0.0426	0.0398	0.0500	0.0500	85	80	73-125	7	17	
1,1-Dichloroethane	0.0436	0.0412	0.0500	0.0500	87	82	79-125	6	17	
Vinyl Acetate	0.0470	0.0410	0.0500	0.0500	94	82	51-145	14	41	
2,2-Dichloropropane	0.0504	0.0465	0.0500	0.0500	101	93	79-126	8	18	
(cis) 1,2-Dichloroethene	0.0407	0.0436	0.0500	0.0500	81	87	75-131	7	15	
2-Butanone	0.0467	0.0391	0.0500	0.0500	93	78	54-145	18	32	
Bromochloromethane	0.0456	0.0445	0.0500	0.0500	91	89	80-126	2	15	
Chloroform	0.0436	0.0410	0.0500	0.0500	87	82	80-123	6	15	
1,1,1-Trichloroethane	0.0418	0.0389	0.0500	0.0500	84	78	78-124	7	21	
Carbon Tetrachloride	0.0401	0.0395	0.0500	0.0500	80	79	74-127	2	18	
1,1-Dichloropropene	0.0372	0.0368	0.0500	0.0500	74	74	80-123	1	15	I,I
Benzene	0.0435	0.0408	0.0500	0.0500	87	82	80-122	6	18	
1,2-Dichloroethane	0.0449	0.0413	0.0500	0.0500	90	83	75-124	8	15	
Trichloroethene	0.0514	0.0490	0.0500	0.0500	103	98	80-129	5	18	
1,2-Dichloropropane	0.0491	0.0472	0.0500	0.0500	98	94	80-123	4	15	
Dibromomethane	0.0462	0.0448	0.0500	0.0500	92	90	80-123	3	15	
Bromodichloromethane	0.0503	0.0480	0.0500	0.0500	101	96	80-129	5	15	
(cis) 1,3-Dichloropropene	0.0508	0.0486	0.0500	0.0500	102	97	80-130	4	15	
Methyl Isobutyl Ketone	0.0475	0.0432	0.0500	0.0500	95	86	63-137	9	27	
Toluene	0.0466	0.0449	0.0500	0.0500	93	90	80-120	4	18	
(trans) 1,3-Dichloropropene	0.0568	0.0544	0.0500	0.0500	114	109	80-124	4	15	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0487	0.0467	0.0500	0.0500	97	93	80-120	4	15	
Tetrachloroethene	0.0595	0.0600	0.0500	0.0500	119	120	77-126	1	15	
1,3-Dichloropropane	0.0521	0.0517	0.0500	0.0500	104	103	77-123	1	15	
2-Hexanone	0.0498	0.0450	0.0500	0.0500	100	90	53-137	10	29	
Dibromochloromethane	0.0555	0.0531	0.0500	0.0500	111	106	80-128	4	16	
1,2-Dibromoethane	0.0536	0.0487	0.0500	0.0500	107	97	80-122	10	20	
Chlorobenzene	0.0534	0.0523	0.0500	0.0500	107	105	80-120	2	18	
1,1,1,2-Tetrachloroethane	0.0527	0.0497	0.0500	0.0500	105	99	80-120	6	15	
Ethylbenzene	0.0539	0.0532	0.0500	0.0500	108	106	80-120	1	15	
m,p-Xylene	0.107	0.104	0.100	0.100	107	104	80-120	3	15	
o-Xylene	0.0541	0.0531	0.0500	0.0500	108	106	80-120	2	15	
Styrene	0.0550	0.0524	0.0500	0.0500	110	105	80-122	5	15	
Bromoform	0.0537	0.0517	0.0500	0.0500	107	103	78-126	4	15	
Isopropylbenzene	0.0549	0.0539	0.0500	0.0500	110	108	80-125	2	15	
Bromobenzene	0.0548	0.0555	0.0500	0.0500	110	111	79-124	1	15	
1,1,2,2-Tetrachloroethane	0.0536	0.0519	0.0500	0.0500	107	104	75-122	3	17	
1,2,3-Trichloropropane	0.0529	0.0508	0.0500	0.0500	106	102	72-125	4	20	
n-Propylbenzene	0.0570	0.0571	0.0500	0.0500	114	114	77-126	0	16	
2-Chlorotoluene	0.0614	0.0596	0.0500	0.0500	123	119	75-128	3	15	
4-Chlorotoluene	0.0590	0.0586	0.0500	0.0500	118	117	78-127	1	16	
1,3,5-Trimethylbenzene	0.0581	0.0571	0.0500	0.0500	116	114	77-128	2	15	
tert-Butylbenzene	0.0578	0.0575	0.0500	0.0500	116	115	73-130	1	20	
1,2,4-Trimethylbenzene	0.0586	0.0579	0.0500	0.0500	117	116	77-125	1	16	
sec-Butylbenzene	0.0563	0.0562	0.0500	0.0500	113	112	75-130	0	17	
1,3-Dichlorobenzene	0.0595	0.0590	0.0500	0.0500	119	118	78-123	1	17	
p-Isopropyltoluene	0.0599	0.0590	0.0500	0.0500	120	118	75-130	2	18	
1,4-Dichlorobenzene	0.0599	0.0587	0.0500	0.0500	120	117	77-121	2	17	
1,2-Dichlorobenzene	0.0569	0.0564	0.0500	0.0500	114	113	80-120	1	15	
n-Butylbenzene	0.0609	0.0590	0.0500	0.0500	122	118	76-131	3	20	
1,2-Dibromo-3-chloropropane	0.0610	0.0578	0.0500	0.0500	122	116	61-137	5	28	
1,2,4-Trichlorobenzene	0.0659	0.0661	0.0500	0.0500	132	132	77-127	0	17	I,I
Hexachlorobutadiene	0.0582	0.0601	0.0500	0.0500	116	120	77-125	3	22	
Naphthalene	0.0572	0.0563	0.0500	0.0500	114	113	68-129	2	19	
1,2,3-Trichlorobenzene	0.0592	0.0607	0.0500	0.0500	118	121	77-124	3	19	
Surrogate:										
Dibromofluoromethane					84	84	75-130			
Toluene-d8					92	94	78-128			
4-Bromofluorobenzene					100	103	71-130			



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
n-Nitrosodimethylamine	ND	0.026	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.087	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
2,4-Dinitrophenol	ND	0.25	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.068	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.082	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	56	11 - 111				
Phenol-d6	53	26 - 117				
Nitrobenzene-d5	54	31 - 111				
2-Fluorobiphenyl	68	38 - 109				
2,4,6-Tribromophenol	68	27 - 127				
Terphenyl-d14	67	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
n-Nitrosodimethylamine	ND	0.026	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.087	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
2,4-Dinitrophenol	ND	0.25	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.029	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.068	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.082	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	47	11 - 111				
Phenol-d6	47	26 - 117				
Nitrobenzene-d5	51	31 - 111				
2-Fluorobiphenyl	53	38 - 109				
2,4,6-Tribromophenol	62	27 - 127				
Terphenyl-d14	70	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-6-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroisopropyl)ether	ND	0.015	EPA 8270E	9-5-23	9-6-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-6-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-5-23	9-6-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-6-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	9-5-23	9-6-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Nitrophenol	ND	0.027	EPA 8270E	9-5-23	9-6-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Nitroaniline	ND	0.026	EPA 8270E	9-5-23	9-6-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4,6-Dinitro-2-methylphenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-6-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-5-23	9-6-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-6-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	77	11 - 111				
Phenol-d6	74	26 - 117				
Nitrobenzene-d5	73	31 - 111				
2-Fluorobiphenyl	90	38 - 109				
2,4,6-Tribromophenol	86	27 - 127				
Terphenyl-d14	93	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Pyridine	ND	0.21	EPA 8270E	9-5-23	9-6-23	
Phenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroisopropyl)ether	ND	0.015	EPA 8270E	9-5-23	9-6-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-5-23	9-6-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	9-5-23	9-6-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Nitrophenol	ND	0.027	EPA 8270E	9-5-23	9-6-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Nitroaniline	ND	0.027	EPA 8270E	9-5-23	9-6-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4,6-Dinitro-2-methylphenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-5-23	9-6-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	65	11 - 111				
Phenol-d6	63	26 - 117				
Nitrobenzene-d5	58	31 - 111				
2-Fluorobiphenyl	76	38 - 109				
2,4,6-Tribromophenol	72	27 - 127				
Terphenyl-d14	71	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Pyridine	ND	0.21	EPA 8270E	9-5-23	9-6-23	
Phenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroisopropyl)ether	ND	0.015	EPA 8270E	9-5-23	9-6-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-5-23	9-6-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-5-23	9-6-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-5-23	9-6-23	



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
2,4-Dinitrophenol	ND	0.14	EPA 8270E	9-5-23	9-6-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4-Nitrophenol	ND	0.027	EPA 8270E	9-5-23	9-6-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-6-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
4-Nitroaniline	ND	0.027	EPA 8270E	9-5-23	9-6-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
4,6-Dinitro-2-methylphenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-6-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-5-23	9-6-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-5-23	9-6-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-6-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-5-23	9-6-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-6-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-5-23	9-6-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	59	11 - 111				
Phenol-d6	56	26 - 117				
Nitrobenzene-d5	58	31 - 111				
2-Fluorobiphenyl	72	38 - 109				
2,4,6-Tribromophenol	64	27 - 127				
Terphenyl-d14	71	37 - 116				



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Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
n-Nitrosodimethylamine	ND	0.025	EPA 8270E	9-5-23	9-5-23	
Pyridine	ND	0.20	EPA 8270E	9-5-23	9-5-23	
Phenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Aniline	ND	0.10	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-5-23	9-5-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroisopropyl)ether	ND	0.014	EPA 8270E	9-5-23	9-5-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-5-23	9-5-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Isophorone	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-5-23	9-5-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-5-23	9-5-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Hexachlorocyclopentadiene	ND	0.086	EPA 8270E	9-5-23	9-5-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S2					
2,4-Dinitrophenol	ND	0.24	EPA 8270E	9-5-23	9-5-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4-Nitrophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-5-23	9-5-23	
2,3,5,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
2,3,4,6-Tetrachlorophenol	ND	0.028	EPA 8270E	9-5-23	9-5-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
4,6-Dinitro-2-methylphenol	ND	0.067	EPA 8270E	9-5-23	9-5-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-5-23	9-5-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-5-23	9-5-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Pentachlorophenol	ND	0.081	EPA 8270E	9-5-23	9-5-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Carbazole	ND	0.010	EPA 8270E	9-5-23	9-5-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-5-23	9-5-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-5-23	9-5-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-5-23	9-5-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	34	11 - 111				
Phenol-d6	34	26 - 117				
Nitrobenzene-d5	33	31 - 111				
2-Fluorobiphenyl	38	38 - 109				
2,4,6-Tribromophenol	37	27 - 127				
Terphenyl-d14	42	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S2									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.274	0.263	0.667	0.667	41	39	20 - 120	4	30	
Pyridine	0.139	0.121	0.667	0.667	21	18	20 - 120	14	30	I
Phenol	0.325	0.292	0.667	0.667	49	44	49 - 109	11	23	I,I
Aniline	0.284	0.267	0.667	0.667	43	40	20 - 120	6	30	
bis(2-Chloroethyl)ether	0.311	0.286	0.667	0.667	47	43	20 - 120	8	30	
2-Chlorophenol	0.327	0.302	0.667	0.667	49	45	52 - 105	8	26	I,I
1,3-Dichlorobenzene	0.296	0.289	0.667	0.667	44	43	20 - 120	2	30	
1,4-Dichlorobenzene	0.312	0.279	0.667	0.667	47	42	51 - 102	11	28	I,I
Benzyl alcohol	0.375	0.338	0.667	0.667	56	51	20 - 120	10	30	
1,2-Dichlorobenzene	0.311	0.303	0.667	0.667	47	45	20 - 120	3	30	
2-Methylphenol (o-Cresol)	0.357	0.319	0.667	0.667	54	48	20 - 120	11	30	
bis(2-Chloroisopropyl)ether	0.242	0.203	0.667	0.667	36	30	20 - 120	18	30	
(3+4)-Methylphenol (m,p-Cresol)	0.381	0.345	0.667	0.667	57	52	20 - 120	10	30	
n-Nitroso-di-n-propylamine	0.327	0.298	0.667	0.667	49	45	46 - 111	9	25	I
Hexachloroethane	0.285	0.261	0.667	0.667	43	39	20 - 120	9	30	
Nitrobenzene	0.301	0.295	0.667	0.667	45	44	20 - 120	2	30	
Isophorone	0.352	0.350	0.667	0.667	53	52	20 - 120	1	30	
2-Nitrophenol	0.362	0.342	0.667	0.667	54	51	20 - 120	6	30	
2,4-Dimethylphenol	0.406	0.402	0.667	0.667	61	60	20 - 120	1	30	
bis(2-Chloroethoxy)methane	0.328	0.329	0.667	0.667	49	49	20 - 120	0	30	
2,4-Dichlorophenol	0.383	0.385	0.667	0.667	57	58	20 - 120	1	30	
1,2,4-Trichlorobenzene	0.336	0.329	0.667	0.667	50	49	52 - 106	2	28	I,I
Naphthalene	0.335	0.339	0.667	0.667	50	51	20 - 120	1	30	
4-Chloroaniline	0.344	0.344	0.667	0.667	52	52	20 - 120	0	30	
Hexachlorobutadiene	0.308	0.289	0.667	0.667	46	43	20 - 120	6	30	
4-Chloro-3-methylphenol	0.361	0.361	0.667	0.667	54	54	54 - 112	0	20	
2-Methylnaphthalene	0.371	0.379	0.667	0.667	56	57	20 - 120	2	30	
1-Methylnaphthalene	0.378	0.378	0.667	0.667	57	57	20 - 120	0	30	
Hexachlorocyclopentadiene	0.335	0.335	0.667	0.667	50	50	20 - 120	0	30	
2,4,6-Trichlorophenol	0.413	0.427	0.667	0.667	62	64	20 - 120	3	30	
2,3-Dichloroaniline	0.371	0.399	0.667	0.667	56	60	20 - 120	7	30	
2,4,5-Trichlorophenol	0.386	0.397	0.667	0.667	58	60	20 - 120	3	30	
2-Chloronaphthalene	0.395	0.374	0.667	0.667	59	56	20 - 120	5	30	
2-Nitroaniline	0.348	0.386	0.667	0.667	52	58	20 - 120	10	30	
1,4-Dinitrobenzene	0.453	0.450	0.667	0.667	68	67	20 - 120	1	30	
Dimethylphthalate	0.418	0.417	0.667	0.667	63	63	20 - 120	0	30	
1,3-Dinitrobenzene	0.428	0.458	0.667	0.667	64	69	20 - 120	7	30	
2,6-Dinitrotoluene	0.419	0.430	0.667	0.667	63	64	20 - 120	3	30	
1,2-Dinitrobenzene	0.395	0.444	0.667	0.667	59	67	20 - 120	12	30	
Acenaphthylene	0.397	0.425	0.667	0.667	60	64	20 - 120	7	30	
3-Nitroaniline	0.426	0.428	0.667	0.667	64	64	20 - 120	0	30	



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 Samples Submitted: September 1, 2023
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 Project: WO-01 - Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S2									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.297	0.285	0.667	0.667	45	43	20 - 120	4	30	
Acenaphthene	0.386	0.394	0.667	0.667	58	59	55 - 101	2	20	
4-Nitrophenol	0.356	0.360	0.667	0.667	53	54	34 - 136	1	22	
2,4-Dinitrotoluene	0.424	0.407	0.667	0.667	64	61	51 - 111	4	21	
Dibenzofuran	0.421	0.418	0.667	0.667	63	63	20 - 120	1	30	
2,3,5,6-Tetrachlorophenol	0.377	0.356	0.667	0.667	57	53	20 - 120	6	30	
2,3,4,6-Tetrachlorophenol	0.402	0.416	0.667	0.667	60	62	20 - 120	3	30	
Diethylphthalate	0.428	0.440	0.667	0.667	64	66	20 - 120	3	30	
4-Chlorophenyl-phenylether	0.428	0.426	0.667	0.667	64	64	20 - 120	0	30	
4-Nitroaniline	0.371	0.395	0.667	0.667	56	59	20 - 120	6	30	
Fluorene	0.418	0.439	0.667	0.667	63	66	20 - 120	5	30	
4,6-Dinitro-2-methylphenol	0.315	0.333	0.667	0.667	47	50	20 - 120	6	30	
n-Nitrosodiphenylamine	0.419	0.400	0.667	0.667	63	60	20 - 120	5	30	
1,2-Diphenylhydrazine	0.398	0.414	0.667	0.667	60	62	20 - 120	4	30	
4-Bromophenyl-phenylether	0.407	0.427	0.667	0.667	61	64	20 - 120	5	30	
Hexachlorobenzene	0.418	0.434	0.667	0.667	63	65	20 - 120	4	30	
Pentachlorophenol	0.342	0.320	0.667	0.667	51	48	34 - 134	7	23	
Phenanthrene	0.423	0.421	0.667	0.667	63	63	20 - 120	0	30	
Anthracene	0.433	0.428	0.667	0.667	65	64	20 - 120	1	30	
Carbazole	0.405	0.408	0.667	0.667	61	61	20 - 120	1	30	
Di-n-butylphthalate	0.421	0.392	0.667	0.667	63	59	20 - 120	7	30	
Fluoranthene	0.435	0.432	0.667	0.667	65	65	20 - 120	1	30	
Pyrene	0.424	0.410	0.667	0.667	64	61	53 - 113	3	20	
Butylbenzylphthalate	0.394	0.399	0.667	0.667	59	60	20 - 120	1	30	
bis-2-Ethylhexyladipate	0.387	0.384	0.667	0.667	58	58	20 - 120	1	30	
3,3'-Dichlorobenzidine	0.396	0.380	0.667	0.667	59	57	20 - 120	4	30	
Benzo[a]anthracene	0.420	0.417	0.667	0.667	63	63	20 - 120	1	30	
Chrysene	0.417	0.402	0.667	0.667	63	60	20 - 120	4	30	
bis(2-Ethylhexyl)phthalate	0.406	0.395	0.667	0.667	61	59	20 - 120	3	30	
Di-n-octylphthalate	0.408	0.413	0.667	0.667	61	62	20 - 120	1	30	
Benzo[b]fluoranthene	0.439	0.406	0.667	0.667	66	61	20 - 120	8	30	
Benzo(j,k)fluoranthene	0.423	0.414	0.667	0.667	63	62	20 - 120	2	30	
Benzo[a]pyrene	0.437	0.428	0.667	0.667	66	64	20 - 120	2	30	
Indeno[1,2,3-cd]pyrene	0.427	0.425	0.667	0.667	64	64	20 - 120	0	30	
Dibenz[a,h]anthracene	0.429	0.429	0.667	0.667	64	64	20 - 120	0	30	
Benzo[g,h,i]perylene	0.425	0.415	0.667	0.667	64	62	20 - 120	2	30	
Surrogate:										
2-Fluorophenol					51	47	11 - 111			
Phenol-d6					56	50	26 - 117			
Nitrobenzene-d5					48	48	31 - 111			
2-Fluorobiphenyl					66	66	38 - 109			
2,4,6-Tribromophenol					66	71	27 - 127			
Terphenyl-d14					68	69	37 - 116			



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-06					
Laboratory ID:	09-011-01					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				
Client ID:	FS-090123-07					
Laboratory ID:	09-011-02					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				
Client ID:	FS-090123-08					
Laboratory ID:	09-011-03					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	97	50-127				



Date of Report: September 6, 2023
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 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-09					
Laboratory ID:	09-011-04					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
Aroclor 1016	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-5-23	9-6-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	94	50-127				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905S1					
Aroclor 1016	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-5-23	9-5-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0905S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.439	0.438	0.500	0.500	N/A	88	88	55-119	0	34
Surrogate:										
DCB						86	82	50-127		



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-06						
Laboratory ID: 09-011-01						
Arsenic	2.6	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	13	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	6.2	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	16	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.8	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	18	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	20	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	25	1.0	EPA 6020B	9-5-23	9-5-23	

Client ID: FS-090123-07						
Laboratory ID: 09-011-02						
Arsenic	2.3	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	11	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	5.1	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	13	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.6	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	16	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	0.11	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	18	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	22	0.51	EPA 6020B	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-090123-08						
Laboratory ID: 09-011-03						
Arsenic	2.3	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	0.065	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	11	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	5.3	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	14	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	2.3	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	17	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	0.057	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	16	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	22	0.51	EPA 6020B	9-5-23	9-5-23	

Client ID: FS-090123-09						
Laboratory ID: 09-011-04						
Arsenic	2.0	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	9.5	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	4.8	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	12	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.4	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	15	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	14	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	20	0.51	EPA 6020B	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-090123-10					
Laboratory ID:	09-011-05					
Arsenic	2.1	0.51	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Chromium	9.5	0.51	EPA 6020B	9-5-23	9-5-23	
Cobalt	4.8	0.13	EPA 6020B	9-5-23	9-5-23	
Copper	12	0.51	EPA 6020B	9-5-23	9-5-23	
Lead	1.6	0.51	EPA 6020B	9-5-23	9-5-23	
Mercury	ND	0.051	EPA 7471B	9-5-23	9-5-23	
Nickel	14	0.51	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.13	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.051	EPA 6020B	9-5-23	9-5-23	
Vanadium	17	0.51	EPA 6020B	9-5-23	9-5-23	
Zinc	19	0.51	EPA 6020B	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0905SM1					
Arsenic	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Cadmium	ND	0.0500	EPA 6020B	9-5-23	9-5-23	
Chromium	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Cobalt	ND	0.125	EPA 6020B	9-5-23	9-5-23	
Copper	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Lead	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Nickel	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Selenium	ND	0.125	EPA 6020B	9-5-23	9-5-23	
Silver	ND	0.0500	EPA 6020B	9-5-23	9-5-23	
Vanadium	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Zinc	ND	0.500	EPA 6020B	9-5-23	9-5-23	
Laboratory ID:	MB0905S1					
Mercury	ND	0.0500	EPA 7471B	9-5-23	9-5-23	



Date of Report: September 6, 2023
 Samples Submitted: September 1, 2023
 Laboratory Reference: 2309-011
 Project: WO-01 - Import Fill Sampling

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-010-01							
	ORIG	DUP						
Arsenic	2.55	2.34	NA	NA	NA	NA	9	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	12.9	11.2	NA	NA	NA	NA	14	20
Cobalt	5.58	5.30	NA	NA	NA	NA	5	20
Copper	14.9	13.6	NA	NA	NA	NA	9	20
Lead	2.01	1.85	NA	NA	NA	NA	8	20
Nickel	17.4	16.0	NA	NA	NA	NA	8	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	0.0770	ND	NA	NA	NA	NA	NA	20
Vanadium	18.3	16.0	NA	NA	NA	NA	13	20
Zinc	25.6	22.9	NA	NA	NA	NA	11	20

Laboratory ID: 08-358-03

Mercury	ND	ND	NA	NA	NA	NA	NA	20
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MATRIX SPIKES

Laboratory ID: 09-010-01

	MS	MSD	MS	MSD		MS	MSD			
Arsenic	96.5	99.5	100	100	2.55	94	97	75-125	3	20
Cadmium	52.0	52.0	50.0	50.0	ND	104	104	75-125	0	20
Chromium	105	104	100	100	12.9	92	91	75-125	0	20
Cobalt	59.5	57.0	50.0	50.0	5.58	108	103	75-125	4	20
Copper	66.5	66.0	50.0	50.0	14.9	103	102	75-125	1	20
Lead	249	252	250	250	2.01	99	100	75-125	1	20
Nickel	120	120	100	100	17.4	103	103	75-125	0	20
Selenium	102	98.5	100	100	ND	102	99	75-125	3	20
Silver	45.8	45.5	50.0	50.0	0.0770	91	91	75-125	1	20
Vanadium	60.0	60.5	50.0	50.0	18.3	84	85	75-125	1	20
Zinc	123	122	100	100	25.6	97	96	75-125	1	20

Laboratory ID: 08-358-03

Mercury	0.515	0.514	0.500	0.500	0.0482	93	93	80-120	0	20
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OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2023
Samples Submitted: September 1, 2023
Laboratory Reference: 2309-011
Project: WO-01 - Import Fill Sampling

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-090123-06	09-011-01	2	9-5-23
FS-090123-07	09-011-02	2	9-5-23
FS-090123-08	09-011-03	1	9-5-23
FS-090123-09	09-011-04	2	9-5-23
FS-090123-10	09-011-05	2	9-5-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 13, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen Import Fill Sampling
Laboratory Reference No. 2309-070

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 11, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
Samples Submitted: September 11, 2023
Laboratory Reference: 2309-070
Project: Jorgensen Import Fill Sampling

Case Narrative

Samples were collected on September 11, 2023 and received by the laboratory on September 11, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Styrene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Semivolatiles EPA 8270E/SIM Analysis

Sample FS-091123-03 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-01					
Laboratory ID:	09-070-01					
Gasoline	ND	2.6	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	74	65-126				
Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
Gasoline	ND	2.7	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	65-126				
Client ID:	FS-091123-03					
Laboratory ID:	09-070-03					
Gasoline	ND	3.0	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	91	65-126				
Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
Gasoline	ND	2.7	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	83	65-126				
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
Gasoline	ND	2.6	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	65-126				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Gasoline	ND	2.5	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-070-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				74	89	65-126		



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-01					
Laboratory ID:	09-070-01					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

Client ID:	FS-091123-03					
Laboratory ID:	09-070-03					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
Diesel Range Organics	ND	8.5	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
Diesel Range Organics	ND	8.4	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Diesel Range Organics	ND	8.3	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-079-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				74	78	50-150		



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-01				
Laboratory ID:		09-070-01				
Dichlorodifluoromethane	ND	0.00081	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0014	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-01					
Laboratory ID:	09-070-01					
(trans) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	93	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	93	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
Dichlorodifluoromethane	ND	0.00080	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0014	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
(trans) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00054	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	93	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	92	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-03				
Laboratory ID:		09-070-03				
Dichlorodifluoromethane	ND	0.00070	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0012	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.00095	EPA 8260D	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-03					
Laboratory ID:	09-070-03					
(trans) 1,3-Dichloropropene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.00095	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00047	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	94	75-130				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	94	71-130				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-04				
Laboratory ID:		09-070-04				
Dichlorodifluoromethane	ND	0.00072	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.00097	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
(trans) 1,3-Dichloropropene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.00097	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00049	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	93	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	94	71-130				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-05				
Laboratory ID:		09-070-05				
Dichlorodifluoromethane	ND	0.00078	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0014	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
(trans) 1,3-Dichloropropene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00053	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-130				
Toluene-d8	92	78-128				
4-Bromofluorobenzene	94	71-130				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S2					
Dichlorodifluoromethane	ND	0.00074	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S2					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0338	0.0343	0.0500	0.0500	68	69	30-160	1	26	
Chloromethane	0.0445	0.0441	0.0500	0.0500	89	88	59-131	1	26	
Vinyl Chloride	0.0407	0.0422	0.0500	0.0500	81	84	68-136	4	23	
Bromomethane	0.0423	0.0460	0.0500	0.0500	85	92	48-155	8	32	
Chloroethane	0.0454	0.0460	0.0500	0.0500	91	92	67-141	1	16	
Trichlorofluoromethane	0.0449	0.0469	0.0500	0.0500	90	94	76-127	4	19	
1,1-Dichloroethene	0.0464	0.0500	0.0500	0.0500	93	100	75-129	7	19	
Acetone	0.0574	0.0586	0.0500	0.0500	115	117	49-158	2	37	
Iodomethane	0.0401	0.0438	0.0500	0.0500	80	88	37-140	9	27	
Carbon Disulfide	0.0393	0.0393	0.0500	0.0500	79	79	41-143	0	19	
Methylene Chloride	0.0471	0.0486	0.0500	0.0500	94	97	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0477	0.0506	0.0500	0.0500	95	101	79-133	6	15	
Methyl t-Butyl Ether	0.0489	0.0496	0.0500	0.0500	98	99	73-125	1	17	
1,1-Dichloroethane	0.0471	0.0490	0.0500	0.0500	94	98	79-125	4	17	
Vinyl Acetate	0.0542	0.0526	0.0500	0.0500	108	105	51-145	3	41	
2,2-Dichloropropane	0.0463	0.0510	0.0500	0.0500	93	102	79-126	10	18	
(cis) 1,2-Dichloroethene	0.0466	0.0486	0.0500	0.0500	93	97	75-131	4	15	
2-Butanone	0.0545	0.0561	0.0500	0.0500	109	112	54-145	3	32	
Bromochloromethane	0.0477	0.0494	0.0500	0.0500	95	99	80-126	4	15	
Chloroform	0.0476	0.0500	0.0500	0.0500	95	100	80-123	5	15	
1,1,1-Trichloroethane	0.0466	0.0491	0.0500	0.0500	93	98	78-124	5	21	
Carbon Tetrachloride	0.0463	0.0501	0.0500	0.0500	93	100	74-127	8	18	
1,1-Dichloropropene	0.0477	0.0513	0.0500	0.0500	95	103	80-123	7	15	
Benzene	0.0467	0.0492	0.0500	0.0500	93	98	80-122	5	18	
1,2-Dichloroethane	0.0469	0.0472	0.0500	0.0500	94	94	75-124	1	15	
Trichloroethene	0.0460	0.0506	0.0500	0.0500	92	101	80-129	10	18	
1,2-Dichloropropane	0.0473	0.0509	0.0500	0.0500	95	102	80-123	7	15	
Dibromomethane	0.0463	0.0460	0.0500	0.0500	93	92	80-123	1	15	
Bromodichloromethane	0.0473	0.0501	0.0500	0.0500	95	100	80-129	6	15	
(cis) 1,3-Dichloropropene	0.0508	0.0535	0.0500	0.0500	102	107	80-130	5	15	
Methyl Isobutyl Ketone	0.0525	0.0529	0.0500	0.0500	105	106	63-137	1	27	
Toluene	0.0437	0.0468	0.0500	0.0500	87	94	80-120	7	18	
(trans) 1,3-Dichloropropene	0.0533	0.0560	0.0500	0.0500	107	112	80-124	5	15	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0526	0.0538	0.0500	0.0500	105	108	80-120	2	15	
Tetrachloroethene	0.0521	0.0571	0.0500	0.0500	104	114	77-126	9	15	
1,3-Dichloropropane	0.0505	0.0538	0.0500	0.0500	101	108	77-123	6	15	
2-Hexanone	0.0569	0.0580	0.0500	0.0500	114	116	53-137	2	29	
Dibromochloromethane	0.0519	0.0537	0.0500	0.0500	104	107	80-128	3	16	
1,2-Dibromoethane	0.0517	0.0544	0.0500	0.0500	103	109	80-122	5	20	
Chlorobenzene	0.0502	0.0543	0.0500	0.0500	100	109	80-120	8	18	
1,1,1,2-Tetrachloroethane	0.0500	0.0540	0.0500	0.0500	100	108	80-120	8	15	
Ethylbenzene	0.0507	0.0558	0.0500	0.0500	101	112	80-120	10	15	
m,p-Xylene	0.099	0.109	0.100	0.100	99	109	80-120	10	15	
o-Xylene	0.0501	0.0540	0.0500	0.0500	100	108	80-120	7	15	
Styrene	0.0566	0.0622	0.0500	0.0500	113	124	80-122	9	15	I
Bromoform	0.0495	0.0523	0.0500	0.0500	99	105	78-126	6	15	
Isopropylbenzene	0.0530	0.0585	0.0500	0.0500	106	117	80-125	10	15	
Bromobenzene	0.0539	0.0576	0.0500	0.0500	108	115	79-124	7	15	
1,1,2,2-Tetrachloroethane	0.0548	0.0558	0.0500	0.0500	110	112	75-122	2	17	
1,2,3-Trichloropropane	0.0557	0.0586	0.0500	0.0500	111	117	72-125	5	20	
n-Propylbenzene	0.0537	0.0598	0.0500	0.0500	107	120	77-126	11	16	
2-Chlorotoluene	0.0543	0.0583	0.0500	0.0500	109	117	75-128	7	15	
4-Chlorotoluene	0.0557	0.0603	0.0500	0.0500	111	121	78-127	8	16	
1,3,5-Trimethylbenzene	0.0560	0.0618	0.0500	0.0500	112	124	77-128	10	15	
tert-Butylbenzene	0.0559	0.0611	0.0500	0.0500	112	122	73-130	9	20	
1,2,4-Trimethylbenzene	0.0547	0.0601	0.0500	0.0500	109	120	77-125	9	16	
sec-Butylbenzene	0.0560	0.0628	0.0500	0.0500	112	126	75-130	11	17	
1,3-Dichlorobenzene	0.0509	0.0565	0.0500	0.0500	102	113	78-123	10	17	
p-Isopropyltoluene	0.0558	0.0645	0.0500	0.0500	112	129	75-130	14	18	
1,4-Dichlorobenzene	0.0521	0.0580	0.0500	0.0500	104	116	77-121	11	17	
1,2-Dichlorobenzene	0.0534	0.0575	0.0500	0.0500	107	115	80-120	7	15	
n-Butylbenzene	0.0569	0.0640	0.0500	0.0500	114	128	76-131	12	20	
1,2-Dibromo-3-chloropropane	0.0561	0.0577	0.0500	0.0500	112	115	61-137	3	28	
1,2,4-Trichlorobenzene	0.0537	0.0612	0.0500	0.0500	107	122	77-127	13	17	
Hexachlorobutadiene	0.0468	0.0522	0.0500	0.0500	94	104	77-125	11	22	
Naphthalene	0.0561	0.0596	0.0500	0.0500	112	119	68-129	6	19	
1,2,3-Trichlorobenzene	0.0560	0.0614	0.0500	0.0500	112	123	77-124	9	19	
Surrogate:										
Dibromofluoromethane					98	93	75-130			
Toluene-d8					94	94	78-128			
4-Bromofluorobenzene					99	103	71-130			



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-01					
Laboratory ID:	09-070-01					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-01					
Laboratory ID:	09-070-01					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	81	11 - 111				
Phenol-d6	70	26 - 117				
Nitrobenzene-d5	80	31 - 111				
2-Fluorobiphenyl	80	38 - 109				
2,4,6-Tribromophenol	93	27 - 127				
Terphenyl-d14	89	37 - 116				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-02					
Laboratory ID:	09-070-02					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	67	11 - 111				
Phenol-d6	63	26 - 117				
Nitrobenzene-d5	66	31 - 111				
2-Fluorobiphenyl	71	38 - 109				
2,4,6-Tribromophenol	85	27 - 127				
Terphenyl-d14	78	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-03					
Laboratory ID:	09-070-03					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-03					
Laboratory ID:	09-070-03					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	34	11 - 111				
Phenol-d6	29	26 - 117				
Nitrobenzene-d5	32	31 - 111				
2-Fluorobiphenyl	32	38 - 109				
2,4,6-Tribromophenol	41	27 - 127				
Terphenyl-d14	38	37 - 116				

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OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.20	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	63	11 - 111				
Phenol-d6	65	26 - 117				
Nitrobenzene-d5	62	31 - 111				
2-Fluorobiphenyl	76	38 - 109				
2,4,6-Tribromophenol	94	27 - 127				
Terphenyl-d14	94	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.20	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	70	11 - 111				
Phenol-d6	69	26 - 117				
Nitrobenzene-d5	66	31 - 111				
2-Fluorobiphenyl	80	38 - 109				
2,4,6-Tribromophenol	107	27 - 127				
Terphenyl-d14	95	37 - 116				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.20	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
2,4-Dinitrophenol	ND	0.27	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4,6-Dinitro-2-methylphenol	ND	0.11	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	77	11 - 111				
Phenol-d6	69	26 - 117				
Nitrobenzene-d5	72	31 - 111				
2-Fluorobiphenyl	76	38 - 109				
2,4,6-Tribromophenol	81	27 - 127				
Terphenyl-d14	71	37 - 116				



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 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.504	0.523	0.667	0.667	76	78	20 - 120	4	30	
Pyridine	0.312	0.311	0.667	0.667	47	47	20 - 120	0	30	
Phenol	0.570	0.567	0.667	0.667	85	85	49 - 109	1	23	
Aniline	0.513	0.497	0.667	0.667	77	75	20 - 120	3	30	
bis(2-Chloroethyl)ether	0.494	0.445	0.667	0.667	74	67	20 - 120	10	30	
2-Chlorophenol	0.551	0.518	0.667	0.667	83	78	52 - 105	6	26	
1,3-Dichlorobenzene	0.506	0.482	0.667	0.667	76	72	20 - 120	5	30	
1,4-Dichlorobenzene	0.509	0.493	0.667	0.667	76	74	51 - 102	3	28	
Benzyl alcohol	0.504	0.549	0.667	0.667	76	82	20 - 120	9	30	
1,2-Dichlorobenzene	0.513	0.507	0.667	0.667	77	76	20 - 120	1	30	
2-Methylphenol (o-Cresol)	0.525	0.534	0.667	0.667	79	80	20 - 120	2	30	
bis(2-Chloroisopropyl)ether	0.505	0.498	0.667	0.667	76	75	20 - 120	1	30	
(3+4)-Methylphenol (m,p-Cresol)	0.574	0.573	0.667	0.667	86	86	20 - 120	0	30	
n-Nitroso-di-n-propylamine	0.572	0.539	0.667	0.667	86	81	46 - 111	6	25	
Hexachloroethane	0.422	0.424	0.667	0.667	63	64	20 - 120	0	30	
Nitrobenzene	0.553	0.540	0.667	0.667	83	81	20 - 120	2	30	
Isophorone	0.560	0.520	0.667	0.667	84	78	20 - 120	7	30	
2-Nitrophenol	0.553	0.562	0.667	0.667	83	84	20 - 120	2	30	
2,4-Dimethylphenol	0.687	0.747	0.667	0.667	103	112	20 - 120	8	30	
bis(2-Chloroethoxy)methane	0.537	0.535	0.667	0.667	81	80	20 - 120	0	30	
2,4-Dichlorophenol	0.544	0.587	0.667	0.667	82	88	20 - 120	8	30	
1,2,4-Trichlorobenzene	0.567	0.559	0.667	0.667	85	84	52 - 106	1	28	
Naphthalene	0.543	0.548	0.667	0.667	81	82	20 - 120	1	30	
4-Chloroaniline	0.512	0.534	0.667	0.667	77	80	20 - 120	4	30	
Hexachlorobutadiene	0.553	0.568	0.667	0.667	83	85	20 - 120	3	30	
4-Chloro-3-methylphenol	0.555	0.593	0.667	0.667	83	89	54 - 112	7	20	
2-Methylnaphthalene	0.591	0.602	0.667	0.667	89	90	20 - 120	2	30	
1-Methylnaphthalene	0.555	0.571	0.667	0.667	83	86	20 - 120	3	30	
Hexachlorocyclopentadiene	0.174	0.178	0.667	0.667	26	27	20 - 120	2	30	
2,4,6-Trichlorophenol	0.608	0.610	0.667	0.667	91	91	20 - 120	0	30	
2,3-Dichloroaniline	0.522	0.521	0.667	0.667	78	78	20 - 120	0	30	
2,4,5-Trichlorophenol	0.659	0.655	0.667	0.667	99	98	20 - 120	1	30	
2-Chloronaphthalene	0.594	0.572	0.667	0.667	89	86	20 - 120	4	30	
2-Nitroaniline	0.594	0.585	0.667	0.667	89	88	20 - 120	2	30	
1,4-Dinitrobenzene	0.618	0.626	0.667	0.667	93	94	20 - 120	1	30	
Dimethylphthalate	0.622	0.636	0.667	0.667	93	95	20 - 120	2	30	
1,3-Dinitrobenzene	0.629	0.617	0.667	0.667	94	93	20 - 120	2	30	
2,6-Dinitrotoluene	0.592	0.624	0.667	0.667	89	94	20 - 120	5	30	
1,2-Dinitrobenzene	0.541	0.512	0.667	0.667	81	77	20 - 120	6	30	
Acenaphthylene	0.566	0.579	0.667	0.667	85	87	20 - 120	2	30	
3-Nitroaniline	0.584	0.559	0.667	0.667	88	84	20 - 120	4	30	



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 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.198	0.179	0.667	0.667	30	27	20 - 120	10	30	
Acenaphthene	0.602	0.618	0.667	0.667	90	93	55 - 101	3	20	
4-Nitrophenol	0.617	0.633	0.667	0.667	93	95	34 - 136	3	22	
2,4-Dinitrotoluene	0.502	0.536	0.667	0.667	75	80	51 - 111	7	21	
Dibenzofuran	0.584	0.616	0.667	0.667	88	92	20 - 120	5	30	
2,3,5,6-Tetrachlorophenol	0.577	0.596	0.667	0.667	87	89	20 - 120	3	30	
2,3,4,6-Tetrachlorophenol	0.546	0.610	0.667	0.667	82	91	20 - 120	11	30	
Diethylphthalate	0.606	0.610	0.667	0.667	91	91	20 - 120	1	30	
4-Chlorophenyl-phenylether	0.635	0.632	0.667	0.667	95	95	20 - 120	0	30	
4-Nitroaniline	0.581	0.506	0.667	0.667	87	76	20 - 120	14	30	
Fluorene	0.620	0.624	0.667	0.667	93	94	20 - 120	1	30	
4,6-Dinitro-2-methylphenol	0.219	0.205	0.667	0.667	33	31	20 - 120	7	30	
n-Nitrosodiphenylamine	0.587	0.553	0.667	0.667	88	83	20 - 120	6	30	
1,2-Diphenylhydrazine	0.601	0.571	0.667	0.667	90	86	20 - 120	5	30	
4-Bromophenyl-phenylether	0.648	0.625	0.667	0.667	97	94	20 - 120	4	30	
Hexachlorobenzene	0.649	0.631	0.667	0.667	97	95	20 - 120	3	30	
Pentachlorophenol	0.660	0.613	0.667	0.667	99	92	34 - 134	7	23	
Phenanthrene	0.583	0.603	0.667	0.667	87	90	20 - 120	3	30	
Anthracene	0.641	0.638	0.667	0.667	96	96	20 - 120	0	30	
Carbazole	0.592	0.563	0.667	0.667	89	84	20 - 120	5	30	
Di-n-butylphthalate	0.633	0.597	0.667	0.667	95	90	20 - 120	6	30	
Fluoranthene	0.648	0.638	0.667	0.667	97	96	20 - 120	2	30	
Pyrene	0.639	0.651	0.667	0.667	96	98	53 - 113	2	20	
Butylbenzylphthalate	0.562	0.636	0.667	0.667	84	95	20 - 120	12	30	
bis-2-Ethylhexyladipate	0.583	0.599	0.667	0.667	87	90	20 - 120	3	30	
3,3'-Dichlorobenzidine	0.519	0.529	0.667	0.667	78	79	20 - 120	2	30	
Benzo[a]anthracene	0.631	0.657	0.667	0.667	95	99	20 - 120	4	30	
Chrysene	0.627	0.696	0.667	0.667	94	104	20 - 120	10	30	
bis(2-Ethylhexyl)phthalate	0.546	0.551	0.667	0.667	82	83	20 - 120	1	30	
Di-n-octylphthalate	0.613	0.645	0.667	0.667	92	97	20 - 120	5	30	
Benzo[b]fluoranthene	0.622	0.639	0.667	0.667	93	96	20 - 120	3	30	
Benzo(j,k)fluoranthene	0.680	0.692	0.667	0.667	102	104	20 - 120	2	30	
Benzo[a]pyrene	0.682	0.672	0.667	0.667	102	101	20 - 120	1	30	
Indeno[1,2,3-cd]pyrene	0.659	0.764	0.667	0.667	99	115	20 - 120	15	30	
Dibenz[a,h]anthracene	0.641	0.652	0.667	0.667	96	98	20 - 120	2	30	
Benzo[g,h,i]perylene	0.637	0.647	0.667	0.667	96	97	20 - 120	2	30	
Surrogate:										
2-Fluorophenol					81	78	11 - 111			
Phenol-d6					86	77	26 - 117			
Nitrobenzene-d5					83	83	31 - 111			
2-Fluorobiphenyl					95	97	38 - 109			
2,4,6-Tribromophenol					110	102	27 - 127			
Terphenyl-d14					94	98	37 - 116			



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-01						
Laboratory ID:	09-070-01					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	83	50-127				
Client ID: FS-091123-02						
Laboratory ID:	09-070-02					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	50-127				
Client ID: FS-091123-03						
Laboratory ID:	09-070-03					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	96	50-127				



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-04					
Laboratory ID:	09-070-04					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	50-127				
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
Aroclor 1016	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	50-127				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Aroclor 1016	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	88	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.444	0.392	0.500	0.500	N/A	89	78	55-119	12	34
Surrogate:										
DCB						85	74	50-127		



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 Laboratory Reference: 2309-070
 Project: Jorgensen Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-01						
Laboratory ID: 09-070-01						
Arsenic	1.7	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	6.3	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	3.4	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	11	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	1.2	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	9.3	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	8.5	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	13	0.52	EPA 6020B	9-12-23	9-12-23	

Client ID: FS-091123-02						
Laboratory ID: 09-070-02						
Arsenic	1.6	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	7.0	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	3.6	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	11	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	1.2	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	11	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	11	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	15	0.52	EPA 6020B	9-12-23	9-12-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-03						
Laboratory ID: 09-070-03						
Arsenic	1.3	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	5.4	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	2.8	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	8.8	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	0.93	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	7.3	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	8.7	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	11	0.52	EPA 6020B	9-12-23	9-12-23	

Client ID: FS-091123-04						
Laboratory ID: 09-070-04						
Arsenic	2.4	0.51	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Chromium	9.9	0.51	EPA 6020B	9-12-23	9-12-23	
Cobalt	4.8	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	15	0.51	EPA 6020B	9-12-23	9-12-23	
Lead	1.8	0.51	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.051	EPA 7471B	9-12-23	9-12-23	
Nickel	12	0.51	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Vanadium	17	0.51	EPA 6020B	9-12-23	9-12-23	
Zinc	20	0.51	EPA 6020B	9-12-23	9-12-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-05					
Laboratory ID:	09-070-05					
Arsenic	1.8	0.51	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Chromium	8.9	0.51	EPA 6020B	9-12-23	9-12-23	
Cobalt	3.7	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	11	0.51	EPA 6020B	9-12-23	9-12-23	
Lead	1.4	0.51	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.051	EPA 7471B	9-12-23	9-12-23	
Nickel	12	0.51	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Vanadium	14	0.51	EPA 6020B	9-12-23	9-12-23	
Zinc	16	0.51	EPA 6020B	9-12-23	9-12-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912SM1					
Arsenic	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.0500	EPA 6020B	9-12-23	9-12-23	
Chromium	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Cobalt	ND	0.125	EPA 6020B	9-12-23	9-12-23	
Copper	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Lead	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Nickel	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.125	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.0500	EPA 6020B	9-12-23	9-12-23	
Vanadium	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Zinc	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Laboratory ID:	SB0912S1					
Mercury	ND	0.0500	EPA 7471B	9-12-23	9-12-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-071-04							
	ORIG	DUP						
Arsenic	1.98	1.86	NA	NA	NA	NA	6	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	11.4	10.7	NA	NA	NA	NA	6	20
Cobalt	4.08	4.15	NA	NA	NA	NA	2	20
Copper	11.0	10.9	NA	NA	NA	NA	1	20
Lead	1.44	1.43	NA	NA	NA	NA	1	20
Nickel	11.9	12.1	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Vanadium	12.9	12.2	NA	NA	NA	NA	6	20
Zinc	17.5	16.9	NA	NA	NA	NA	4	20

Laboratory ID:	09-071-04							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-071-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	106	108	100	100	1.98	104	106	75-125	1	20
Cadmium	54.5	55.0	50.0	50.0	ND	109	110	75-125	1	20
Chromium	113	109	100	100	11.4	101	98	75-125	3	20
Cobalt	66.5	65.0	50.0	50.0	4.08	125	122	75-125	2	20
Copper	73.0	70.0	50.0	50.0	11.0	124	118	75-125	4	20
Lead	275	272	250	250	1.44	109	108	75-125	1	20
Nickel	132	127	100	100	11.9	120	115	75-125	3	20
Selenium	114	113	100	100	ND	114	113	75-125	0	20
Silver	24.9	24.8	25.0	25.0	ND	100	99	75-125	0	20
Vanadium	68.0	64.0	50.0	50.0	12.9	110	102	75-125	6	20
Zinc	127	123	100	100	17.5	110	106	75-125	3	20

Laboratory ID:	08-358-03									
Mercury	0.498	0.486	0.500	0.500	0.0188	96	93	80-120	2	20



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% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-091123-01	09-070-01	3	9-12-23
FS-091123-02	09-070-02	3	9-12-23
FS-091123-03	09-070-03	3	9-12-23
FS-091123-04	09-070-04	2	9-12-23
FS-091123-05	09-070-05	1	9-12-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Page 1 of 1

Phone: (425) 883-3881 • www.onsite-env.com

DH Environmental

Torpersen Import Fill Sampling

Sampled by: N. Maxley / B. Johnson

☐ Same Day ☒ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ *Best Available*

_____ (date)

**Turnaround Request
(in working days)**
(Check One)

09-070

Company: <u>DH Environmental</u>		(Check One)				
Project Number:		☐ Same Day ☒ 1 Day				
Project Name: <u>Torjensen Impact Fill Sampling</u>		☐ 2 Days ☐ 3 Days				
Project Manager: <u>D. Hill</u>		☐ Standard (7 Days)				
Sampled by: <u>N. Moxley / B. Johnson</u>		☒ Best Available (other) _____				
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	
1	FS-091123-01	9/11/23	1300	Soil	5	
2	FS-091123-02		1305			
3	FS-091123-03		1310			
4	FS-091123-04		1315			
5	FS-091123-05		1320			
NWTPH-HCID						
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)						
☒ NWTPH-Gx						
☐ NWTPH-Dx (SG Clean-up ☐)						
☒ Volatiles 8260						
☐ Halogenated Volatiles 8260						
☐ EDB EPA 8011 (Waters Only)						
☒ Semivolatiles 8270/SIM (with low-level PAHs)						
☐ PAHs 8270/SIM (low-level)						
☒ PCBs 8082						
☐ Organochlorine Pesticides 8081						
☐ Organophosphorus Pesticides 8270/SIM						
☐ Chlorinated Acid Herbicides 8151						
☒ Total BONA Metals * (see list)						
☐ Total MTCA Metals						
☐ TCLP Metals						
☐ HEM (oil and grease) 1664						
☒ % Moisture						
Signature		Company		Date	Time	Comments/Special Instructions
		DH Env.		9-11-23	1535	* As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, V, Zn, and Co
Relinquished						
Received						
Relinquished						
Received						
Relinquished						
Reviewed/Date		Reviewed/Date		Data Package: Standard ☒ Level III ☐ Level IV ☐		
				Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒		



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 13, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgensen Import Fill Sampling
Laboratory Reference No. 2309-071

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 11, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
Samples Submitted: September 11, 2023
Laboratory Reference: 2309-071
Project: Jorgensen Import Fill Sampling

Case Narrative

Samples were collected on September 11, 2023 and received by the laboratory on September 11, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

The percent recovery for Styrene is outside the control limits in the Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-06					
Laboratory ID:	09-071-01					
Gasoline	ND	2.9	NWTPH-Gx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	65-126				
Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
Gasoline	ND	2.1	NWTPH-Gx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	65-126				
Client ID:	FS-091123-08					
Laboratory ID:	09-071-03					
Gasoline	ND	2.9	NWTPH-Gx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				
Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
Gasoline	ND	2.5	NWTPH-Gx	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	65-126				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Gasoline	ND	2.5	NWTPH-Gx	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-070-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				74	89	65-126		



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-06					
Laboratory ID:	09-071-01					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-12-23	9-13-23	
Lube Oil	18	17	NWTPH-Dx	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>84</i>	<i>50-150</i>				

Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-13-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>84</i>	<i>50-150</i>				

Client ID:	FS-091123-08					
Laboratory ID:	09-071-03					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-13-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>77</i>	<i>50-150</i>				

Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-12-23	9-13-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>87</i>	<i>50-150</i>				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Diesel Range Organics	ND	8.3	NWTPH-Dx	9-12-23	9-12-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-079-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Lube Oil Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				74	78	50-150		



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-06				
Laboratory ID:		09-071-01				
Dichlorodifluoromethane	ND	0.00074	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	



Date of Report: September 13, 2023
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 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-06					
Laboratory ID:	09-071-01					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	94	71-130				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
Dichlorodifluoromethane	ND	0.00075	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
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VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
(trans) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00051	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	94	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-08				
Laboratory ID:		09-071-03				
Dichlorodifluoromethane	ND	0.00074	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Acetone	0.0080	0.0050	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-08					
Laboratory ID:	09-071-03					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	94	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-091123-09				
Laboratory ID:		09-071-04				
Dichlorodifluoromethane	ND	0.00073	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.00099	EPA 8260D	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.00099	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-130				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	92	71-130				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S2					
Dichlorodifluoromethane	ND	0.00074	EPA 8260D	9-12-23	9-12-23	
Chloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromomethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Acetone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Iodomethane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-12-23	9-12-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Butanone	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Chloroform	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Benzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Toluene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S2					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
o-Xylene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Styrene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromoform	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-12-23	9-12-23	
Naphthalene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
1,2,3-Trichlorobenzene	ND	0.00050	EPA 8260D	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S2									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0338	0.0343	0.0500	0.0500	68	69	30-160	1	26	
Chloromethane	0.0445	0.0441	0.0500	0.0500	89	88	59-131	1	26	
Vinyl Chloride	0.0407	0.0422	0.0500	0.0500	81	84	68-136	4	23	
Bromomethane	0.0423	0.0460	0.0500	0.0500	85	92	48-155	8	32	
Chloroethane	0.0454	0.0460	0.0500	0.0500	91	92	67-141	1	16	
Trichlorofluoromethane	0.0449	0.0469	0.0500	0.0500	90	94	76-127	4	19	
1,1-Dichloroethene	0.0464	0.0500	0.0500	0.0500	93	100	75-129	7	19	
Acetone	0.0574	0.0586	0.0500	0.0500	115	117	49-158	2	37	
Iodomethane	0.0401	0.0438	0.0500	0.0500	80	88	37-140	9	27	
Carbon Disulfide	0.0393	0.0393	0.0500	0.0500	79	79	41-143	0	19	
Methylene Chloride	0.0471	0.0486	0.0500	0.0500	94	97	60-124	3	18	
(trans) 1,2-Dichloroethene	0.0477	0.0506	0.0500	0.0500	95	101	79-133	6	15	
Methyl t-Butyl Ether	0.0489	0.0496	0.0500	0.0500	98	99	73-125	1	17	
1,1-Dichloroethane	0.0471	0.0490	0.0500	0.0500	94	98	79-125	4	17	
Vinyl Acetate	0.0542	0.0526	0.0500	0.0500	108	105	51-145	3	41	
2,2-Dichloropropane	0.0463	0.0510	0.0500	0.0500	93	102	79-126	10	18	
(cis) 1,2-Dichloroethene	0.0466	0.0486	0.0500	0.0500	93	97	75-131	4	15	
2-Butanone	0.0545	0.0561	0.0500	0.0500	109	112	54-145	3	32	
Bromochloromethane	0.0477	0.0494	0.0500	0.0500	95	99	80-126	4	15	
Chloroform	0.0476	0.0500	0.0500	0.0500	95	100	80-123	5	15	
1,1,1-Trichloroethane	0.0466	0.0491	0.0500	0.0500	93	98	78-124	5	21	
Carbon Tetrachloride	0.0463	0.0501	0.0500	0.0500	93	100	74-127	8	18	
1,1-Dichloropropene	0.0477	0.0513	0.0500	0.0500	95	103	80-123	7	15	
Benzene	0.0467	0.0492	0.0500	0.0500	93	98	80-122	5	18	
1,2-Dichloroethane	0.0469	0.0472	0.0500	0.0500	94	94	75-124	1	15	
Trichloroethene	0.0460	0.0506	0.0500	0.0500	92	101	80-129	10	18	
1,2-Dichloropropane	0.0473	0.0509	0.0500	0.0500	95	102	80-123	7	15	
Dibromomethane	0.0463	0.0460	0.0500	0.0500	93	92	80-123	1	15	
Bromodichloromethane	0.0473	0.0501	0.0500	0.0500	95	100	80-129	6	15	
(cis) 1,3-Dichloropropene	0.0508	0.0535	0.0500	0.0500	102	107	80-130	5	15	
Methyl Isobutyl Ketone	0.0525	0.0529	0.0500	0.0500	105	106	63-137	1	27	
Toluene	0.0437	0.0468	0.0500	0.0500	87	94	80-120	7	18	
(trans) 1,3-Dichloropropene	0.0533	0.0560	0.0500	0.0500	107	112	80-124	5	15	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0526	0.0538	0.0500	0.0500	105	108	80-120	2	15	
Tetrachloroethene	0.0521	0.0571	0.0500	0.0500	104	114	77-126	9	15	
1,3-Dichloropropane	0.0505	0.0538	0.0500	0.0500	101	108	77-123	6	15	
2-Hexanone	0.0569	0.0580	0.0500	0.0500	114	116	53-137	2	29	
Dibromochloromethane	0.0519	0.0537	0.0500	0.0500	104	107	80-128	3	16	
1,2-Dibromoethane	0.0517	0.0544	0.0500	0.0500	103	109	80-122	5	20	
Chlorobenzene	0.0502	0.0543	0.0500	0.0500	100	109	80-120	8	18	
1,1,1,2-Tetrachloroethane	0.0500	0.0540	0.0500	0.0500	100	108	80-120	8	15	
Ethylbenzene	0.0507	0.0558	0.0500	0.0500	101	112	80-120	10	15	
m,p-Xylene	0.099	0.109	0.100	0.100	99	109	80-120	10	15	
o-Xylene	0.0501	0.0540	0.0500	0.0500	100	108	80-120	7	15	
Styrene	0.0566	0.0622	0.0500	0.0500	113	124	80-122	9	15	I
Bromoform	0.0495	0.0523	0.0500	0.0500	99	105	78-126	6	15	
Isopropylbenzene	0.0530	0.0585	0.0500	0.0500	106	117	80-125	10	15	
Bromobenzene	0.0539	0.0576	0.0500	0.0500	108	115	79-124	7	15	
1,1,2,2-Tetrachloroethane	0.0548	0.0558	0.0500	0.0500	110	112	75-122	2	17	
1,2,3-Trichloropropane	0.0557	0.0586	0.0500	0.0500	111	117	72-125	5	20	
n-Propylbenzene	0.0537	0.0598	0.0500	0.0500	107	120	77-126	11	16	
2-Chlorotoluene	0.0543	0.0583	0.0500	0.0500	109	117	75-128	7	15	
4-Chlorotoluene	0.0557	0.0603	0.0500	0.0500	111	121	78-127	8	16	
1,3,5-Trimethylbenzene	0.0560	0.0618	0.0500	0.0500	112	124	77-128	10	15	
tert-Butylbenzene	0.0559	0.0611	0.0500	0.0500	112	122	73-130	9	20	
1,2,4-Trimethylbenzene	0.0547	0.0601	0.0500	0.0500	109	120	77-125	9	16	
sec-Butylbenzene	0.0560	0.0628	0.0500	0.0500	112	126	75-130	11	17	
1,3-Dichlorobenzene	0.0509	0.0565	0.0500	0.0500	102	113	78-123	10	17	
p-Isopropyltoluene	0.0558	0.0645	0.0500	0.0500	112	129	75-130	14	18	
1,4-Dichlorobenzene	0.0521	0.0580	0.0500	0.0500	104	116	77-121	11	17	
1,2-Dichlorobenzene	0.0534	0.0575	0.0500	0.0500	107	115	80-120	7	15	
n-Butylbenzene	0.0569	0.0640	0.0500	0.0500	114	128	76-131	12	20	
1,2-Dibromo-3-chloropropane	0.0561	0.0577	0.0500	0.0500	112	115	61-137	3	28	
1,2,4-Trichlorobenzene	0.0537	0.0612	0.0500	0.0500	107	122	77-127	13	17	
Hexachlorobutadiene	0.0468	0.0522	0.0500	0.0500	94	104	77-125	11	22	
Naphthalene	0.0561	0.0596	0.0500	0.0500	112	119	68-129	6	19	
1,2,3-Trichlorobenzene	0.0560	0.0614	0.0500	0.0500	112	123	77-124	9	19	
Surrogate:										
Dibromofluoromethane					98	93	75-130			
Toluene-d8					94	94	78-128			
4-Bromofluorobenzene					99	103	71-130			



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-06					
Laboratory ID:	09-071-01					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-06					
Laboratory ID:	09-071-01					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.042	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	63	11 - 111				
Phenol-d6	58	26 - 117				
Nitrobenzene-d5	63	31 - 111				
2-Fluorobiphenyl	72	38 - 109				
2,4,6-Tribromophenol	83	27 - 127				
Terphenyl-d14	76	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-07					
Laboratory ID:	09-071-02					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	55	11 - 111				
Phenol-d6	59	26 - 117				
Nitrobenzene-d5	56	31 - 111				
2-Fluorobiphenyl	72	38 - 109				
2,4,6-Tribromophenol	91	27 - 127				
Terphenyl-d14	84	37 - 116				



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-08					
Laboratory ID:	09-071-03					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-08					
Laboratory ID:	09-071-03					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	68	11 - 111				
Phenol-d6	71	26 - 117				
Nitrobenzene-d5	76	31 - 111				
2-Fluorobiphenyl	86	38 - 109				
2,4,6-Tribromophenol	98	27 - 127				
Terphenyl-d14	92	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.21	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
2,4-Dinitrophenol	ND	0.28	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
4,6-Dinitro-2-methylphenol	ND	0.12	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.041	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	37	11 - 111				
Phenol-d6	43	26 - 117				
Nitrobenzene-d5	38	31 - 111				
2-Fluorobiphenyl	53	38 - 109				
2,4,6-Tribromophenol	73	27 - 127				
Terphenyl-d14	70	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Pyridine	ND	0.20	EPA 8270E	9-12-23	9-12-23	
Phenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Aniline	ND	0.10	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-12-23	9-12-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Isophorone	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Hexachlorocyclopentadiene	ND	0.12	EPA 8270E	9-12-23	9-12-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
2,4-Dinitrophenol	ND	0.27	EPA 8270E	9-12-23	9-12-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4-Nitrophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-12-23	9-12-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
4,6-Dinitro-2-methylphenol	ND	0.11	EPA 8270E	9-12-23	9-12-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-12-23	9-12-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-12-23	9-12-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Pentachlorophenol	ND	0.040	EPA 8270E	9-12-23	9-12-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Carbazole	ND	0.010	EPA 8270E	9-12-23	9-12-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
3,3'-Dichlorobenzidine	ND	0.13	EPA 8270E	9-12-23	9-12-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-12-23	9-12-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-12-23	9-12-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-12-23	9-13-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	77	11 - 111				
Phenol-d6	69	26 - 117				
Nitrobenzene-d5	72	31 - 111				
2-Fluorobiphenyl	76	38 - 109				
2,4,6-Tribromophenol	81	27 - 127				
Terphenyl-d14	71	37 - 116				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.504	0.523	0.667	0.667	76	78	20 - 120	4	30	
Pyridine	0.312	0.311	0.667	0.667	47	47	20 - 120	0	30	
Phenol	0.570	0.567	0.667	0.667	85	85	49 - 109	1	23	
Aniline	0.513	0.497	0.667	0.667	77	75	20 - 120	3	30	
bis(2-Chloroethyl)ether	0.494	0.445	0.667	0.667	74	67	20 - 120	10	30	
2-Chlorophenol	0.551	0.518	0.667	0.667	83	78	52 - 105	6	26	
1,3-Dichlorobenzene	0.506	0.482	0.667	0.667	76	72	20 - 120	5	30	
1,4-Dichlorobenzene	0.509	0.493	0.667	0.667	76	74	51 - 102	3	28	
Benzyl alcohol	0.504	0.549	0.667	0.667	76	82	20 - 120	9	30	
1,2-Dichlorobenzene	0.513	0.507	0.667	0.667	77	76	20 - 120	1	30	
2-Methylphenol (o-Cresol)	0.525	0.534	0.667	0.667	79	80	20 - 120	2	30	
bis(2-Chloroisopropyl)ether	0.505	0.498	0.667	0.667	76	75	20 - 120	1	30	
(3+4)-Methylphenol (m,p-Cresol)	0.574	0.573	0.667	0.667	86	86	20 - 120	0	30	
n-Nitroso-di-n-propylamine	0.572	0.539	0.667	0.667	86	81	46 - 111	6	25	
Hexachloroethane	0.422	0.424	0.667	0.667	63	64	20 - 120	0	30	
Nitrobenzene	0.553	0.540	0.667	0.667	83	81	20 - 120	2	30	
Isophorone	0.560	0.520	0.667	0.667	84	78	20 - 120	7	30	
2-Nitrophenol	0.553	0.562	0.667	0.667	83	84	20 - 120	2	30	
2,4-Dimethylphenol	0.687	0.747	0.667	0.667	103	112	20 - 120	8	30	
bis(2-Chloroethoxy)methane	0.537	0.535	0.667	0.667	81	80	20 - 120	0	30	
2,4-Dichlorophenol	0.544	0.587	0.667	0.667	82	88	20 - 120	8	30	
1,2,4-Trichlorobenzene	0.567	0.559	0.667	0.667	85	84	52 - 106	1	28	
Naphthalene	0.543	0.548	0.667	0.667	81	82	20 - 120	1	30	
4-Chloroaniline	0.512	0.534	0.667	0.667	77	80	20 - 120	4	30	
Hexachlorobutadiene	0.553	0.568	0.667	0.667	83	85	20 - 120	3	30	
4-Chloro-3-methylphenol	0.555	0.593	0.667	0.667	83	89	54 - 112	7	20	
2-Methylnaphthalene	0.591	0.602	0.667	0.667	89	90	20 - 120	2	30	
1-Methylnaphthalene	0.555	0.571	0.667	0.667	83	86	20 - 120	3	30	
Hexachlorocyclopentadiene	0.174	0.178	0.667	0.667	26	27	20 - 120	2	30	
2,4,6-Trichlorophenol	0.608	0.610	0.667	0.667	91	91	20 - 120	0	30	
2,3-Dichloroaniline	0.522	0.521	0.667	0.667	78	78	20 - 120	0	30	
2,4,5-Trichlorophenol	0.659	0.655	0.667	0.667	99	98	20 - 120	1	30	
2-Chloronaphthalene	0.594	0.572	0.667	0.667	89	86	20 - 120	4	30	
2-Nitroaniline	0.594	0.585	0.667	0.667	89	88	20 - 120	2	30	
1,4-Dinitrobenzene	0.618	0.626	0.667	0.667	93	94	20 - 120	1	30	
Dimethylphthalate	0.622	0.636	0.667	0.667	93	95	20 - 120	2	30	
1,3-Dinitrobenzene	0.629	0.617	0.667	0.667	94	93	20 - 120	2	30	
2,6-Dinitrotoluene	0.592	0.624	0.667	0.667	89	94	20 - 120	5	30	
1,2-Dinitrobenzene	0.541	0.512	0.667	0.667	81	77	20 - 120	6	30	
Acenaphthylene	0.566	0.579	0.667	0.667	85	87	20 - 120	2	30	
3-Nitroaniline	0.584	0.559	0.667	0.667	88	84	20 - 120	4	30	



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Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.198	0.179	0.667	0.667	30	27	20 - 120	10	30	
Acenaphthene	0.602	0.618	0.667	0.667	90	93	55 - 101	3	20	
4-Nitrophenol	0.617	0.633	0.667	0.667	93	95	34 - 136	3	22	
2,4-Dinitrotoluene	0.502	0.536	0.667	0.667	75	80	51 - 111	7	21	
Dibenzofuran	0.584	0.616	0.667	0.667	88	92	20 - 120	5	30	
2,3,5,6-Tetrachlorophenol	0.577	0.596	0.667	0.667	87	89	20 - 120	3	30	
2,3,4,6-Tetrachlorophenol	0.546	0.610	0.667	0.667	82	91	20 - 120	11	30	
Diethylphthalate	0.606	0.610	0.667	0.667	91	91	20 - 120	1	30	
4-Chlorophenyl-phenylether	0.635	0.632	0.667	0.667	95	95	20 - 120	0	30	
4-Nitroaniline	0.581	0.506	0.667	0.667	87	76	20 - 120	14	30	
Fluorene	0.620	0.624	0.667	0.667	93	94	20 - 120	1	30	
4,6-Dinitro-2-methylphenol	0.219	0.205	0.667	0.667	33	31	20 - 120	7	30	
n-Nitrosodiphenylamine	0.587	0.553	0.667	0.667	88	83	20 - 120	6	30	
1,2-Diphenylhydrazine	0.601	0.571	0.667	0.667	90	86	20 - 120	5	30	
4-Bromophenyl-phenylether	0.648	0.625	0.667	0.667	97	94	20 - 120	4	30	
Hexachlorobenzene	0.649	0.631	0.667	0.667	97	95	20 - 120	3	30	
Pentachlorophenol	0.660	0.613	0.667	0.667	99	92	34 - 134	7	23	
Phenanthrene	0.583	0.603	0.667	0.667	87	90	20 - 120	3	30	
Anthracene	0.641	0.638	0.667	0.667	96	96	20 - 120	0	30	
Carbazole	0.592	0.563	0.667	0.667	89	84	20 - 120	5	30	
Di-n-butylphthalate	0.633	0.597	0.667	0.667	95	90	20 - 120	6	30	
Fluoranthene	0.648	0.638	0.667	0.667	97	96	20 - 120	2	30	
Pyrene	0.639	0.651	0.667	0.667	96	98	53 - 113	2	20	
Butylbenzylphthalate	0.562	0.636	0.667	0.667	84	95	20 - 120	12	30	
bis-2-Ethylhexyladipate	0.583	0.599	0.667	0.667	87	90	20 - 120	3	30	
3,3'-Dichlorobenzidine	0.519	0.529	0.667	0.667	78	79	20 - 120	2	30	
Benzo[a]anthracene	0.631	0.657	0.667	0.667	95	99	20 - 120	4	30	
Chrysene	0.627	0.696	0.667	0.667	94	104	20 - 120	10	30	
bis(2-Ethylhexyl)phthalate	0.546	0.551	0.667	0.667	82	83	20 - 120	1	30	
Di-n-octylphthalate	0.613	0.645	0.667	0.667	92	97	20 - 120	5	30	
Benzo[b]fluoranthene	0.622	0.639	0.667	0.667	93	96	20 - 120	3	30	
Benzo(j,k)fluoranthene	0.680	0.692	0.667	0.667	102	104	20 - 120	2	30	
Benzo[a]pyrene	0.682	0.672	0.667	0.667	102	101	20 - 120	1	30	
Indeno[1,2,3-cd]pyrene	0.659	0.764	0.667	0.667	99	115	20 - 120	15	30	
Dibenz[a,h]anthracene	0.641	0.652	0.667	0.667	96	98	20 - 120	2	30	
Benzo[g,h,i]perylene	0.637	0.647	0.667	0.667	96	97	20 - 120	2	30	
Surrogate:										
2-Fluorophenol					81	78	11 - 111			
Phenol-d6					86	77	26 - 117			
Nitrobenzene-d5					83	83	31 - 111			
2-Fluorobiphenyl					95	97	38 - 109			
2,4,6-Tribromophenol					110	102	27 - 127			
Terphenyl-d14					94	98	37 - 116			



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-06						
Laboratory ID:	09-071-01					
Aroclor 1016	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				
Client ID: FS-091123-07						
Laboratory ID:	09-071-02					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				
Client ID: FS-091123-08						
Laboratory ID:	09-071-03					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	50-127				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-091123-09					
Laboratory ID:	09-071-04					
Aroclor 1016	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-12-23	9-12-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	91	50-127				



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Aroclor 1016	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-12-23	9-12-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	88	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0912S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.444	0.392	0.500	0.500	N/A	89	78	55-119	12	34
Surrogate:										
DCB						85	74	50-127		



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-06						
Laboratory ID: 09-071-01						
Arsenic	2.2	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	0.12	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	13	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	4.6	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	15	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	2.1	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	13	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	0.15	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	0.071	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	16	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	19	0.52	EPA 6020B	9-12-23	9-12-23	

Client ID: FS-091123-07						
Laboratory ID: 09-071-02						
Arsenic	1.7	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	8.0	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	4.3	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	11	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	1.7	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	10	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	13	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	16	0.52	EPA 6020B	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-091123-08						
Laboratory ID: 09-071-03						
Arsenic	1.9	0.52	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Chromium	9.3	0.52	EPA 6020B	9-12-23	9-12-23	
Cobalt	4.2	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	12	0.52	EPA 6020B	9-12-23	9-12-23	
Lead	1.6	0.52	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.052	EPA 7471B	9-12-23	9-12-23	
Nickel	12	0.52	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.052	EPA 6020B	9-12-23	9-12-23	
Vanadium	16	0.52	EPA 6020B	9-12-23	9-12-23	
Zinc	18	0.52	EPA 6020B	9-12-23	9-12-23	

Client ID: FS-091123-09						
Laboratory ID: 09-071-04						
Arsenic	2.0	0.51	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Chromium	12	0.51	EPA 6020B	9-12-23	9-12-23	
Cobalt	4.2	0.13	EPA 6020B	9-12-23	9-12-23	
Copper	11	0.51	EPA 6020B	9-12-23	9-12-23	
Lead	1.5	0.51	EPA 6020B	9-12-23	9-12-23	
Mercury	ND	0.051	EPA 7471B	9-12-23	9-12-23	
Nickel	12	0.51	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.13	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.051	EPA 6020B	9-12-23	9-12-23	
Vanadium	13	2.6	EPA 6020B	9-12-23	9-12-23	
Zinc	18	2.6	EPA 6020B	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912SM1					
Arsenic	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Cadmium	ND	0.0500	EPA 6020B	9-12-23	9-12-23	
Chromium	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Cobalt	ND	0.125	EPA 6020B	9-12-23	9-12-23	
Copper	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Lead	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Nickel	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Selenium	ND	0.125	EPA 6020B	9-12-23	9-12-23	
Silver	ND	0.0500	EPA 6020B	9-12-23	9-12-23	
Vanadium	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Zinc	ND	0.500	EPA 6020B	9-12-23	9-12-23	
Laboratory ID:	SB0912S1					
Mercury	ND	0.0500	EPA 7471B	9-12-23	9-12-23	



Date of Report: September 13, 2023
 Samples Submitted: September 11, 2023
 Laboratory Reference: 2309-071
 Project: Jorgensen Import Fill Sampling

**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-071-04							
	ORIG	DUP						
Arsenic	1.98	1.86	NA	NA	NA	NA	6	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	11.4	10.7	NA	NA	NA	NA	6	20
Cobalt	4.08	4.15	NA	NA	NA	NA	2	20
Copper	11.0	10.9	NA	NA	NA	NA	1	20
Lead	1.44	1.43	NA	NA	NA	NA	1	20
Nickel	11.9	12.1	NA	NA	NA	NA	1	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Vanadium	12.9	12.2	NA	NA	NA	NA	6	20
Zinc	17.5	16.9	NA	NA	NA	NA	4	20

Laboratory ID:	09-071-04							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-071-04									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	106	108	100	100	1.98	104	106	75-125	1	20
Cadmium	54.5	55.0	50.0	50.0	ND	109	110	75-125	1	20
Chromium	113	109	100	100	11.4	101	98	75-125	3	20
Cobalt	66.5	65.0	50.0	50.0	4.08	125	122	75-125	2	20
Copper	73.0	70.0	50.0	50.0	11.0	124	118	75-125	4	20
Lead	275	272	250	250	1.44	109	108	75-125	1	20
Nickel	132	127	100	100	11.9	120	115	75-125	3	20
Selenium	114	113	100	100	ND	114	113	75-125	0	20
Silver	24.9	24.8	25.0	25.0	ND	100	99	75-125	0	20
Vanadium	68.0	64.0	50.0	50.0	12.9	110	102	75-125	6	20
Zinc	127	123	100	100	17.5	110	106	75-125	3	20

Laboratory ID:	08-358-03									
Mercury	0.498	0.486	0.500	0.500	0.0188	96	93	80-120	2	20



Date of Report: September 13, 2023
Samples Submitted: September 11, 2023
Laboratory Reference: 2309-071
Project: Jorgensen Import Fill Sampling

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-091123-06	09-071-01	4	9-12-23
FS-091123-07	09-071-02	3	9-12-23
FS-091123-08	09-071-03	3	9-12-23
FS-091123-09	09-071-04	3	9-12-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 www.onsite-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com			Turnaround Request (in working days)			Laboratory Number: 09-071															
Company: <u>DK Environmental</u>			☐ Same Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)			☒ Best Available (other)															
Project Name: <u>Torquero Import Fill Sampling</u>			☐ Standard (7 Days)																		
Project Manager: <u>D. Hill</u>																					
Sampled by: <u>N. McElroy / B. Johnson</u>																					
Lab ID			Date Sampled			Time Sampled			Matrix			Number of Containers									
1			9/11/23			1325			Soil			5									
2						1330															
3						1335															
4						1340															
5						1345															
FS-091123-06																					
FS-091123-07																					
FS-091123-08																					
FS-091123-09																					
FS-091123-10																					
Signature			Company			Date			Time			Comments/Special Instructions									
			OH Env.			9-11-23			1535			* As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, V, Zn, and Co									
Relinquished																					
Received																					
Relinquished																					
Received																					
Relinquished																					
Received																					
Relinquished																					
Reviewed/Date			Reviewed/Date			Reviewed/Date			Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒									



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 3, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Jorgenson Import Fill Sampling
Laboratory Reference No. 2309-278

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 26, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 3, 2023
Samples Submitted: September 26, 2023
Laboratory Reference: 2309-278
Project: Jorgenson Import Fill Sampling

Case Narrative

Samples were collected on September 26, 2023 and received by the laboratory on September 26, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270E/SIM Analysis

The RPD for Hexachloroethane, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, and 4,6-Dinitro-2-methylphenol is outside the control limits for the Spike Blank/Spike Blank Duplicate. The percent recoveries on both spike blanks are within recovery limits. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
Gasoline	ND	2.7	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	65-126				
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
Gasoline	ND	3.1	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	87	65-126				
Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
Gasoline	ND	3.1	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	86	65-126				
Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
Gasoline	ND	2.8	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	85	65-126				
Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
Gasoline	ND	2.7	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	83	65-126				
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
Gasoline	ND	3.0	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	84	65-126				
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
Gasoline	ND	2.8	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	87	65-126				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
Gasoline	ND	2.8	NWTPH-Gx	9-26-23	9-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	82	65-126				
Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
Gasoline	ND	2.5	NWTPH-Gx	9-26-23	9-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	65-126				
Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
Gasoline	ND	2.4	NWTPH-Gx	9-26-23	9-26-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	65-126				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0926S2					
Gasoline	ND	2.5	NWTPH-Gx	9-26-23	9-26-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-126				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-278-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				86	87	65-126		



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				

Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	79	50-150				

Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
Diesel Range Organics	ND	8.6	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	18	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				

Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
Diesel Range Organics	ND	8.7	NWTPH-Dx	9-28-23	9-29-23	
Lube Oil Range Organics	ND	18	NWTPH-Dx	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				



Date of Report: October 3, 2023
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 Project: Jorgenson Import Fill Sampling

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0928S1					
Diesel Range Organics	ND	8.3	NWTPH-Dx	9-28-23	9-28-23	
Lube Oil Range Organics	ND	17	NWTPH-Dx	9-28-23	9-28-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	SB0928S1							
	ORIG	DUP						
Diesel Fuel #2	77.3	76.5	NA	NA	NA	NA	1	40
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				73	73	50-150		



Date of Report: October 3, 2023
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 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-01				
Laboratory ID:		09-278-01				
Dichlorodifluoromethane	ND	0.00080	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
(trans) 1,3-Dichloropropene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00060	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0024	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	107	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	100	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
Dichlorodifluoromethane	ND	0.00081	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	



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 Project: Jorgenson Import Fill Sampling

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
(trans) 1,3-Dichloropropene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00061	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0024	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	109	75-130				
Toluene-d8	96	78-128				
4-Bromofluorobenzene	98	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-03				
Laboratory ID:		09-278-03				
Dichlorodifluoromethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Chloromethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Vinyl Chloride	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Bromomethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Chloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Trichlorofluoromethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Acetone	ND	0.0052	EPA 8260D	10-3-23	10-3-23	
Iodomethane	ND	0.0068	EPA 8260D	10-3-23	10-3-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Methylene Chloride	ND	0.0052	EPA 8260D	10-3-23	10-3-23	
(trans) 1,2-Dichloroethene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Methyl t-Butyl Ether	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Vinyl Acetate	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
2,2-Dichloropropane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
(cis) 1,2-Dichloroethene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
2-Butanone	ND	0.0052	EPA 8260D	10-3-23	10-3-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Chloroform	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
1,1,1-Trichloroethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Carbon Tetrachloride	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloropropene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Benzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloroethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Trichloroethene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Bromodichloromethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260D	10-3-23	10-3-23	
(cis) 1,3-Dichloropropene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Toluene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
(trans) 1,3-Dichloropropene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1,2-Trichloroethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Tetrachloroethene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,3-Dichloropropane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
2-Hexanone	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Dibromochloromethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromoethane	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Chlorobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Ethylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
m,p-Xylene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
o-Xylene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Styrene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Bromoform	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Isopropylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Bromobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
n-Propylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
2-Chlorotoluene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
4-Chlorotoluene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,3,5-Trimethylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
tert-Butylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trimethylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
sec-Butylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,3-Dichlorobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
p-Isopropyltoluene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,4-Dichlorobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2-Dichlorobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
n-Butylbenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trichlorobenzene	ND	0.00052	EPA 8260D	10-3-23	10-3-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Naphthalene	ND	0.0021	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	90	75-130				
Toluene-d8	91	78-128				
4-Bromofluorobenzene	104	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-04						
Laboratory ID: 09-278-04						
Dichlorodifluoromethane	ND	0.00076	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0011	EPA 8260D	9-29-23	9-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
(trans) 1,3-Dichloropropene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00057	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0023	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	108	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	100	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-05						
Laboratory ID: 09-278-05						
Dichlorodifluoromethane	ND	0.00087	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0013	EPA 8260D	9-29-23	9-29-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
(trans) 1,3-Dichloropropene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00065	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0026	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	109	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	98	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
Dichlorodifluoromethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
(trans) 1,3-Dichloropropene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00051	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0021	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	107	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	102	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-07				
Laboratory ID:		09-278-07				
Dichlorodifluoromethane	ND	0.00079	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
(trans) 1,3-Dichloropropene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00059	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0024	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	109	75-130				
Toluene-d8	93	78-128				
4-Bromofluorobenzene	100	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
Dichlorodifluoromethane	ND	0.00092	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0014	EPA 8260D	9-29-23	9-29-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
(trans) 1,3-Dichloropropene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0069	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00069	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0028	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	107	75-130				
Toluene-d8	95	78-128				
4-Bromofluorobenzene	98	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-09						
Laboratory ID: 09-278-09						
Dichlorodifluoromethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Chloromethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Vinyl Chloride	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Bromomethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Chloroethane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Trichlorofluoromethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Acetone	ND	0.0054	EPA 8260D	10-3-23	10-3-23	
Iodomethane	ND	0.0070	EPA 8260D	10-3-23	10-3-23	
Carbon Disulfide	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Methylene Chloride	ND	0.0054	EPA 8260D	10-3-23	10-3-23	
(trans) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Methyl t-Butyl Ether	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Vinyl Acetate	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
2,2-Dichloropropane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
(cis) 1,2-Dichloroethene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
2-Butanone	ND	0.0054	EPA 8260D	10-3-23	10-3-23	
Bromochloromethane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Chloroform	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
1,1,1-Trichloroethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Carbon Tetrachloride	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloropropene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Benzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloroethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Trichloroethene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloropropane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Dibromomethane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Bromodichloromethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260D	10-3-23	10-3-23	
(cis) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Methyl Isobutyl Ketone	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Toluene	ND	0.0011	EPA 8260D	10-3-23	10-3-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
(trans) 1,3-Dichloropropene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1,2-Trichloroethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Tetrachloroethene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,3-Dichloropropane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
2-Hexanone	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Dibromochloromethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromoethane	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Chlorobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Ethylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
m,p-Xylene	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
o-Xylene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Styrene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Bromoform	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Isopropylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Bromobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
n-Propylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
2-Chlorotoluene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
4-Chlorotoluene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,3,5-Trimethylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
tert-Butylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trimethylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
sec-Butylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,3-Dichlorobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
p-Isopropyltoluene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,4-Dichlorobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2-Dichlorobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
n-Butylbenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trichlorobenzene	ND	0.00054	EPA 8260D	10-3-23	10-3-23	
Hexachlorobutadiene	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Naphthalene	ND	0.0021	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260D	10-3-23	10-3-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-130				
Toluene-d8	90	78-128				
4-Bromofluorobenzene	105	71-130				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-10						
Laboratory ID: 09-278-10						
Dichlorodifluoromethane	ND	0.00066	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.00099	EPA 8260D	9-29-23	9-29-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
(trans) 1,3-Dichloropropene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00049	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0020	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260D	9-29-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	108	75-130				
Toluene-d8	94	78-128				
4-Bromofluorobenzene	101	71-130				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0929S1					
Dichlorodifluoromethane	ND	0.00067	EPA 8260D	9-29-23	9-29-23	
Chloromethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Bromomethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Chloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Acetone	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
Iodomethane	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Methylene Chloride	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
2-Butanone	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
Bromochloromethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Chloroform	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Benzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Trichloroethene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Dibromomethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Toluene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0929S1					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
2-Hexanone	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Chlorobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Ethylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
m,p-Xylene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
o-Xylene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Styrene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Bromoform	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Bromobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	9-29-23	9-29-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	9-29-23	9-29-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
Naphthalene	ND	0.0020	EPA 8260D	9-29-23	9-29-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	9-29-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1003S1					
Dichlorodifluoromethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Chloromethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Vinyl Chloride	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Bromomethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Chloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Trichlorofluoromethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Acetone	ND	0.0050	EPA 8260D	10-3-23	10-3-23	
Iodomethane	ND	0.0065	EPA 8260D	10-3-23	10-3-23	
Carbon Disulfide	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Methylene Chloride	ND	0.0050	EPA 8260D	10-3-23	10-3-23	
(trans) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Methyl t-Butyl Ether	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloroethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Vinyl Acetate	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
2,2-Dichloropropane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
(cis) 1,2-Dichloroethene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
2-Butanone	ND	0.0050	EPA 8260D	10-3-23	10-3-23	
Bromochloromethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Chloroform	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
1,1,1-Trichloroethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Carbon Tetrachloride	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1-Dichloropropene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Benzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloroethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Trichloroethene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Dibromomethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Bromodichloromethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	10-3-23	10-3-23	
(cis) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Methyl Isobutyl Ketone	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Toluene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1003S1					
(trans) 1,3-Dichloropropene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1,2-Trichloroethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Tetrachloroethene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,3-Dichloropropane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
2-Hexanone	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Dibromochloromethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromoethane	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Chlorobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Ethylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
m,p-Xylene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
o-Xylene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Styrene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Bromoform	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Isopropylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Bromobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
n-Propylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
2-Chlorotoluene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
4-Chlorotoluene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,3,5-Trimethylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
tert-Butylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trimethylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
sec-Butylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,3-Dichlorobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
p-Isopropyltoluene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,4-Dichlorobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2-Dichlorobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
n-Butylbenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	10-3-23	10-3-23	
1,2,4-Trichlorobenzene	ND	0.00050	EPA 8260D	10-3-23	10-3-23	
Hexachlorobutadiene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
Naphthalene	ND	0.0020	EPA 8260D	10-3-23	10-3-23	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	10-3-23	10-3-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>71-130</i>				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0929S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0375	0.0318	0.0500	0.0500	75	64	30-160	16	26	
Chloromethane	0.0450	0.0417	0.0500	0.0500	90	83	59-131	8	26	
Vinyl Chloride	0.0450	0.0421	0.0500	0.0500	90	84	68-136	7	23	
Bromomethane	0.0475	0.0468	0.0500	0.0500	95	94	48-155	1	32	
Chloroethane	0.0541	0.0535	0.0500	0.0500	108	107	67-141	1	16	
Trichlorofluoromethane	0.0531	0.0516	0.0500	0.0500	106	103	76-127	3	19	
1,1-Dichloroethene	0.0553	0.0530	0.0500	0.0500	111	106	75-129	4	19	
Acetone	0.0708	0.0786	0.0500	0.0500	142	157	49-158	10	37	
Iodomethane	0.0440	0.0458	0.0500	0.0500	88	92	37-140	4	27	
Carbon Disulfide	0.0485	0.0465	0.0500	0.0500	97	93	41-143	4	19	
Methylene Chloride	0.0545	0.0534	0.0500	0.0500	109	107	60-124	2	18	
(trans) 1,2-Dichloroethene	0.0555	0.0547	0.0500	0.0500	111	109	79-133	1	15	
Methyl t-Butyl Ether	0.0569	0.0605	0.0500	0.0500	114	121	73-125	6	17	
1,1-Dichloroethane	0.0550	0.0532	0.0500	0.0500	110	106	79-125	3	17	
Vinyl Acetate	0.0605	0.0661	0.0500	0.0500	121	132	51-145	9	41	
2,2-Dichloropropane	0.0556	0.0542	0.0500	0.0500	111	108	79-126	3	18	
(cis) 1,2-Dichloroethene	0.0550	0.0525	0.0500	0.0500	110	105	75-131	5	15	
2-Butanone	0.0621	0.0715	0.0500	0.0500	124	143	54-145	14	32	
Bromochloromethane	0.0562	0.0573	0.0500	0.0500	112	115	80-126	2	15	
Chloroform	0.0551	0.0537	0.0500	0.0500	110	107	80-123	3	15	
1,1,1-Trichloroethane	0.0553	0.0527	0.0500	0.0500	111	105	78-124	5	21	
Carbon Tetrachloride	0.0554	0.0530	0.0500	0.0500	111	106	74-127	4	18	
1,1-Dichloropropene	0.0549	0.0536	0.0500	0.0500	110	107	80-123	2	15	
Benzene	0.0543	0.0524	0.0500	0.0500	109	105	80-122	4	18	
1,2-Dichloroethane	0.0560	0.0572	0.0500	0.0500	112	114	75-124	2	15	
Trichloroethene	0.0518	0.0484	0.0500	0.0500	104	97	80-129	7	18	
1,2-Dichloropropane	0.0509	0.0495	0.0500	0.0500	102	99	80-123	3	15	
Dibromomethane	0.0525	0.0513	0.0500	0.0500	105	103	80-123	2	15	
Bromodichloromethane	0.0537	0.0504	0.0500	0.0500	107	101	80-129	6	15	
(cis) 1,3-Dichloropropene	0.0546	0.0535	0.0500	0.0500	109	107	80-130	2	15	
Methyl Isobutyl Ketone	0.0562	0.0633	0.0500	0.0500	112	127	63-137	12	27	
Toluene	0.0488	0.0458	0.0500	0.0500	98	92	80-120	6	18	
(trans) 1,3-Dichloropropene	0.0569	0.0555	0.0500	0.0500	114	111	80-124	2	15	



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0929S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0555	0.0545	0.0500	0.0500	111	109	80-120	2	15	
Tetrachloroethene	0.0553	0.0502	0.0500	0.0500	111	100	77-126	10	15	
1,3-Dichloropropane	0.0555	0.0542	0.0500	0.0500	111	108	77-123	2	15	
2-Hexanone	0.0571	0.0643	0.0500	0.0500	114	129	53-137	12	29	
Dibromochloromethane	0.0559	0.0536	0.0500	0.0500	112	107	80-128	4	16	
1,2-Dibromoethane	0.0559	0.0561	0.0500	0.0500	112	112	80-122	0	20	
Chlorobenzene	0.0535	0.0498	0.0500	0.0500	107	100	80-120	7	18	
1,1,1,2-Tetrachloroethane	0.0537	0.0499	0.0500	0.0500	107	100	80-120	7	15	
Ethylbenzene	0.0537	0.0486	0.0500	0.0500	107	97	80-120	10	15	
m,p-Xylene	0.108	0.100	0.100	0.100	108	100	80-120	8	15	
o-Xylene	0.0535	0.0501	0.0500	0.0500	107	100	80-120	7	15	
Styrene	0.0625	0.0584	0.0500	0.0500	125	117	80-122	7	15	I
Bromoform	0.0569	0.0565	0.0500	0.0500	114	113	78-126	1	15	
Isopropylbenzene	0.0575	0.0516	0.0500	0.0500	115	103	80-125	11	15	
Bromobenzene	0.0535	0.0487	0.0500	0.0500	107	97	79-124	9	15	
1,1,2,2-Tetrachloroethane	0.0549	0.0534	0.0500	0.0500	110	107	75-122	3	17	
1,2,3-Trichloropropane	0.0559	0.0548	0.0500	0.0500	112	110	72-125	2	20	
n-Propylbenzene	0.0544	0.0472	0.0500	0.0500	109	94	77-126	14	16	
2-Chlorotoluene	0.0531	0.0467	0.0500	0.0500	106	93	75-128	13	15	
4-Chlorotoluene	0.0577	0.0519	0.0500	0.0500	115	104	78-127	11	16	
1,3,5-Trimethylbenzene	0.0571	0.0510	0.0500	0.0500	114	102	77-128	11	15	
tert-Butylbenzene	0.0562	0.0491	0.0500	0.0500	112	98	73-130	13	20	
1,2,4-Trimethylbenzene	0.0558	0.0498	0.0500	0.0500	112	100	77-125	11	16	
sec-Butylbenzene	0.0570	0.0499	0.0500	0.0500	114	100	75-130	13	17	
1,3-Dichlorobenzene	0.0529	0.0474	0.0500	0.0500	106	95	78-123	11	17	
p-Isopropyltoluene	0.0587	0.0524	0.0500	0.0500	117	105	75-130	11	18	
1,4-Dichlorobenzene	0.0556	0.0498	0.0500	0.0500	111	100	77-121	11	17	
1,2-Dichlorobenzene	0.0554	0.0515	0.0500	0.0500	111	103	80-120	7	15	
n-Butylbenzene	0.0592	0.0518	0.0500	0.0500	118	104	76-131	13	20	
1,2-Dibromo-3-chloropropane	0.0583	0.0599	0.0500	0.0500	117	120	61-137	3	28	
1,2,4-Trichlorobenzene	0.0550	0.0502	0.0500	0.0500	110	100	77-127	9	17	
Hexachlorobutadiene	0.0467	0.0402	0.0500	0.0500	93	80	77-125	15	22	
Naphthalene	0.0580	0.0574	0.0500	0.0500	116	115	68-129	1	19	
1,2,3-Trichlorobenzene	0.0587	0.0536	0.0500	0.0500	117	107	77-124	9	19	
Surrogate:										
Dibromofluoromethane					105	109	75-130			
Toluene-d8					93	96	78-128			
4-Bromofluorobenzene					109	112	71-130			



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent	Recovery		RPD		
					Recovery	Limits	RPD	Limit	Flags	
SPIKE BLANKS										
Laboratory ID:	SB1003S1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	0.0527	0.0524	0.0500	0.0500	105	105	30-160	1	26	
Chloromethane	0.0482	0.0493	0.0500	0.0500	96	99	59-131	2	26	
Vinyl Chloride	0.0453	0.0454	0.0500	0.0500	91	91	68-136	0	23	
Bromomethane	0.0432	0.0467	0.0500	0.0500	86	93	48-155	8	32	
Chloroethane	0.0526	0.0539	0.0500	0.0500	105	108	67-141	2	16	
Trichlorofluoromethane	0.0513	0.0541	0.0500	0.0500	103	108	76-127	5	19	
1,1-Dichloroethene	0.0503	0.0509	0.0500	0.0500	101	102	75-129	1	19	
Acetone	0.0654	0.0701	0.0500	0.0500	131	140	49-158	7	37	
Iodomethane	0.0386	0.0447	0.0500	0.0500	77	89	37-140	15	27	
Carbon Disulfide	0.0410	0.0415	0.0500	0.0500	82	83	41-143	1	19	
Methylene Chloride	0.0481	0.0492	0.0500	0.0500	96	98	60-124	2	18	
(trans) 1,2-Dichloroethene	0.0509	0.0517	0.0500	0.0500	102	103	79-133	2	15	
Methyl t-Butyl Ether	0.0535	0.0538	0.0500	0.0500	107	108	73-125	1	17	
1,1-Dichloroethane	0.0491	0.0509	0.0500	0.0500	98	102	79-125	4	17	
Vinyl Acetate	0.0564	0.0584	0.0500	0.0500	113	117	51-145	3	41	
2,2-Dichloropropane	0.0500	0.0512	0.0500	0.0500	100	102	79-126	2	18	
(cis) 1,2-Dichloroethene	0.0491	0.0502	0.0500	0.0500	98	100	75-131	2	15	
2-Butanone	0.0578	0.0588	0.0500	0.0500	116	118	54-145	2	32	
Bromochloromethane	0.0522	0.0528	0.0500	0.0500	104	106	80-126	1	15	
Chloroform	0.0501	0.0507	0.0500	0.0500	100	101	80-123	1	15	
1,1,1-Trichloroethane	0.0487	0.0499	0.0500	0.0500	97	100	78-124	2	21	
Carbon Tetrachloride	0.0496	0.0510	0.0500	0.0500	99	102	74-127	3	18	
1,1-Dichloropropene	0.0493	0.0515	0.0500	0.0500	99	103	80-123	4	15	
Benzene	0.0488	0.0504	0.0500	0.0500	98	101	80-122	3	18	
1,2-Dichloroethane	0.0523	0.0524	0.0500	0.0500	105	105	75-124	0	15	
Trichloroethene	0.0502	0.0502	0.0500	0.0500	100	100	80-129	0	18	
1,2-Dichloropropane	0.0511	0.0511	0.0500	0.0500	102	102	80-123	0	15	
Dibromomethane	0.0514	0.0518	0.0500	0.0500	103	104	80-123	1	15	
Bromodichloromethane	0.0511	0.0515	0.0500	0.0500	102	103	80-129	1	15	
(cis) 1,3-Dichloropropene	0.0541	0.0540	0.0500	0.0500	108	108	80-130	0	15	
Methyl Isobutyl Ketone	0.0561	0.0556	0.0500	0.0500	112	111	63-137	1	27	
Toluene	0.0474	0.0483	0.0500	0.0500	95	97	80-120	2	18	
(trans) 1,3-Dichloropropene	0.0517	0.0540	0.0500	0.0500	103	108	80-124	4	15	



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

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Analyte	Result	Spike Level	Percent		Recovery		RPD	RPD		
			Recovery	Limits	Limit	Flags				
SPIKE BLANKS										
Laboratory ID:	SB1003S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0510	0.0532	0.0500	0.0500	102	106	80-120	4	15	
Tetrachloroethene	0.0494	0.0513	0.0500	0.0500	99	103	77-126	4	15	
1,3-Dichloropropane	0.0508	0.0522	0.0500	0.0500	102	104	77-123	3	15	
2-Hexanone	0.0526	0.0551	0.0500	0.0500	105	110	53-137	5	29	
Dibromochloromethane	0.0510	0.0528	0.0500	0.0500	102	106	80-128	3	16	
1,2-Dibromoethane	0.0521	0.0544	0.0500	0.0500	104	109	80-122	4	20	
Chlorobenzene	0.0486	0.0503	0.0500	0.0500	97	101	80-120	3	18	
1,1,1,2-Tetrachloroethane	0.0492	0.0500	0.0500	0.0500	98	100	80-120	2	15	
Ethylbenzene	0.0485	0.0505	0.0500	0.0500	97	101	80-120	4	15	
m,p-Xylene	0.0976	0.100	0.100	0.100	98	100	80-120	2	15	
o-Xylene	0.0490	0.0506	0.0500	0.0500	98	101	80-120	3	15	
Styrene	0.0566	0.0582	0.0500	0.0500	113	116	80-122	3	15	
Bromoform	0.0523	0.0533	0.0500	0.0500	105	107	78-126	2	15	
Isopropylbenzene	0.0515	0.0533	0.0500	0.0500	103	107	80-125	3	15	
Bromobenzene	0.0476	0.0479	0.0500	0.0500	95	96	79-124	1	15	
1,1,2,2-Tetrachloroethane	0.0497	0.0485	0.0500	0.0500	99	97	75-122	2	17	
1,2,3-Trichloropropane	0.0519	0.0512	0.0500	0.0500	104	102	72-125	1	20	
n-Propylbenzene	0.0480	0.0473	0.0500	0.0500	96	95	77-126	1	16	
2-Chlorotoluene	0.0470	0.0481	0.0500	0.0500	94	96	75-128	2	15	
4-Chlorotoluene	0.0513	0.0504	0.0500	0.0500	103	101	78-127	2	16	
1,3,5-Trimethylbenzene	0.0501	0.0505	0.0500	0.0500	100	101	77-128	1	15	
tert-Butylbenzene	0.0500	0.0500	0.0500	0.0500	100	100	73-130	0	20	
1,2,4-Trimethylbenzene	0.0496	0.0504	0.0500	0.0500	99	101	77-125	2	16	
sec-Butylbenzene	0.0509	0.0504	0.0500	0.0500	102	101	75-130	1	17	
1,3-Dichlorobenzene	0.0478	0.0479	0.0500	0.0500	96	96	78-123	0	17	
p-Isopropyltoluene	0.0520	0.0528	0.0500	0.0500	104	106	75-130	2	18	
1,4-Dichlorobenzene	0.0492	0.0494	0.0500	0.0500	98	99	77-121	0	17	
1,2-Dichlorobenzene	0.0495	0.0501	0.0500	0.0500	99	100	80-120	1	15	
n-Butylbenzene	0.0516	0.0518	0.0500	0.0500	103	104	76-131	0	20	
1,2-Dibromo-3-chloropropane	0.0555	0.0535	0.0500	0.0500	111	107	61-137	4	28	
1,2,4-Trichlorobenzene	0.0514	0.0498	0.0500	0.0500	103	100	77-127	3	17	
Hexachlorobutadiene	0.0439	0.0419	0.0500	0.0500	88	84	77-125	5	22	
Naphthalene	0.0553	0.0533	0.0500	0.0500	111	107	68-129	4	19	
1,2,3-Trichlorobenzene	0.0549	0.0528	0.0500	0.0500	110	106	77-124	4	19	
Surrogate:										
Dibromofluoromethane					91	93	75-130			
Toluene-d8					94	93	78-128			
4-Bromofluorobenzene					115	116	71-130			



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	75	11 - 111				
Phenol-d6	76	26 - 117				
Nitrobenzene-d5	73	31 - 111				
2-Fluorobiphenyl	75	38 - 109				
2,4,6-Tribromophenol	82	27 - 127				
Terphenyl-d14	71	37 - 116				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	83	11 - 111				
Phenol-d6	88	26 - 117				
Nitrobenzene-d5	81	31 - 111				
2-Fluorobiphenyl	84	38 - 109				
2,4,6-Tribromophenol	95	27 - 127				
Terphenyl-d14	83	37 - 116				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	63	11 - 111				
Phenol-d6	68	26 - 117				
Nitrobenzene-d5	65	31 - 111				
2-Fluorobiphenyl	65	38 - 109				
2,4,6-Tribromophenol	71	27 - 127				
Terphenyl-d14	63	37 - 116				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	67	11 - 111				
Phenol-d6	75	26 - 117				
Nitrobenzene-d5	70	31 - 111				
2-Fluorobiphenyl	74	38 - 109				
2,4,6-Tribromophenol	87	27 - 127				
Terphenyl-d14	76	37 - 116				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	83	11 - 111				
Phenol-d6	86	26 - 117				
Nitrobenzene-d5	82	31 - 111				
2-Fluorobiphenyl	81	38 - 109				
2,4,6-Tribromophenol	89	27 - 127				
Terphenyl-d14	78	37 - 116				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	83	11 - 111				
Phenol-d6	86	26 - 117				
Nitrobenzene-d5	83	31 - 111				
2-Fluorobiphenyl	82	38 - 109				
2,4,6-Tribromophenol	88	27 - 127				
Terphenyl-d14	75	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	92	11 - 111				
Phenol-d6	96	26 - 117				
Nitrobenzene-d5	90	31 - 111				
2-Fluorobiphenyl	86	38 - 109				
2,4,6-Tribromophenol	99	27 - 127				
Terphenyl-d14	85	37 - 116				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.041	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.041	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.041	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.053	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	76	11 - 111				
Phenol-d6	79	26 - 117				
Nitrobenzene-d5	76	31 - 111				
2-Fluorobiphenyl	75	38 - 109				
2,4,6-Tribromophenol	81	27 - 127				
Terphenyl-d14	71	37 - 116				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	80	11 - 111				
Phenol-d6	83	26 - 117				
Nitrobenzene-d5	81	31 - 111				
2-Fluorobiphenyl	80	38 - 109				
2,4,6-Tribromophenol	91	27 - 127				
Terphenyl-d14	77	37 - 116				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
n-Nitrosodimethylamine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.21	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.021	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.042	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.042	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

SEMIVOLATILE ORGANICS EPA 8270E/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
2,4-Dinitrophenol	ND	0.17	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.021	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.054	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.021	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	75	11 - 111				
Phenol-d6	79	26 - 117				
Nitrobenzene-d5	74	31 - 111				
2-Fluorobiphenyl	78	38 - 109				
2,4,6-Tribromophenol	90	27 - 127				
Terphenyl-d14	74	37 - 116				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0927S1					
n-Nitrosodimethylamine	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Pyridine	ND	0.20	EPA 8270E	9-27-23	9-27-23	
Phenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Aniline	ND	0.10	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Chlorophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
1,3-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,4-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Benzyl alcohol	ND	0.040	EPA 8270E	9-27-23	9-27-23	
1,2-Dichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Methylphenol (o-Cresol)	ND	0.020	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroisopropyl)ether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.020	EPA 8270E	9-27-23	9-27-23	
n-Nitroso-di-n-propylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachloroethane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Nitrobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Isophorone	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitrophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,4-Dimethylphenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
bis(2-Chloroethoxy)methane	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,4-Dichlorophenol	ND	0.040	EPA 8270E	9-27-23	9-27-23	
1,2,4-Trichlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Naphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Chloroaniline	ND	0.040	EPA 8270E	9-27-23	9-27-23	
Hexachlorobutadiene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Chloro-3-methylphenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
1-Methylnaphthalene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270E	9-27-23	9-27-23	
2,4,6-Trichlorophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,3-Dichloroaniline	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,4,5-Trichlorophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2-Chloronaphthalene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2-Nitroaniline	ND	0.020	EPA 8270E	9-27-23	9-27-23	
1,4-Dinitrobenzene	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Dimethylphthalate	ND	0.020	EPA 8270E	9-27-23	9-27-23	
1,3-Dinitrobenzene	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,6-Dinitrotoluene	ND	0.020	EPA 8270E	9-27-23	9-27-23	
1,2-Dinitrobenzene	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Acenaphthylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
3-Nitroaniline	ND	0.020	EPA 8270E	9-27-23	9-27-23	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0927S1					
2,4-Dinitrophenol	ND	0.16	EPA 8270E	9-27-23	9-27-23	
Acenaphthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4-Nitrophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,4-Dinitrotoluene	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Dibenzofuran	ND	0.010	EPA 8270E	9-27-23	9-27-23	
2,3,5,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
2,3,4,6-Tetrachlorophenol	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Diethylphthalate	ND	0.020	EPA 8270E	9-27-23	9-27-23	
4-Chlorophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
4-Nitroaniline	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Fluorene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
4,6-Dinitro-2-methylphenol	ND	0.052	EPA 8270E	9-27-23	9-27-23	
n-Nitrosodiphenylamine	ND	0.010	EPA 8270E	9-27-23	9-27-23	
1,2-Diphenylhydrazine	ND	0.020	EPA 8270E	9-27-23	9-27-23	
4-Bromophenyl-phenylether	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Hexachlorobenzene	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Pentachlorophenol	ND	0.051	EPA 8270E	9-27-23	9-27-23	
Phenanthrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Carbazole	ND	0.010	EPA 8270E	9-27-23	9-27-23	
Di-n-butylphthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Butylbenzylphthalate	ND	0.020	EPA 8270E	9-27-23	9-27-23	
bis-2-Ethylhexyladipate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
3,3'-Dichlorobenzidine	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Benzo[a]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Chrysene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
bis(2-Ethylhexyl)phthalate	ND	0.10	EPA 8270E	9-27-23	9-27-23	
Di-n-octylphthalate	ND	0.020	EPA 8270E	9-27-23	9-27-23	
Benzo[b]fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo(j,k)fluoranthene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[a]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Indeno[1,2,3-cd]pyrene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Dibenz[a,h]anthracene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Benzo[g,h,i]perylene	ND	0.0020	EPA 8270E/SIM	9-27-23	9-27-23	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	56	11 - 111				
Phenol-d6	60	26 - 117				
Nitrobenzene-d5	57	31 - 111				
2-Fluorobiphenyl	59	38 - 109				
2,4,6-Tribromophenol	67	27 - 127				
Terphenyl-d14	64	37 - 116				



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0927S1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	0.492	0.571	0.667	0.667	74	86	20 - 120	15	30	
Pyridine	0.385	0.491	0.667	0.667	58	74	20 - 120	24	30	
Phenol	0.486	0.581	0.667	0.667	73	87	49 - 109	18	23	
Aniline	0.525	0.633	0.667	0.667	79	95	20 - 120	19	30	
bis(2-Chloroethyl)ether	0.475	0.573	0.667	0.667	71	86	20 - 120	19	30	
2-Chlorophenol	0.496	0.587	0.667	0.667	74	88	52 - 105	17	26	
1,3-Dichlorobenzene	0.460	0.560	0.667	0.667	69	84	20 - 120	20	30	
1,4-Dichlorobenzene	0.443	0.548	0.667	0.667	66	82	51 - 102	21	28	
Benzyl alcohol	0.511	0.615	0.667	0.667	77	92	20 - 120	18	30	
1,2-Dichlorobenzene	0.463	0.572	0.667	0.667	69	86	20 - 120	21	30	
2-Methylphenol (o-Cresol)	0.510	0.611	0.667	0.667	76	92	20 - 120	18	30	
bis(2-Chloroisopropyl)ether	0.486	0.584	0.667	0.667	73	88	20 - 120	18	30	
(3+4)-Methylphenol (m,p-Cresol)	0.520	0.613	0.667	0.667	78	92	20 - 120	16	30	
n-Nitroso-di-n-propylamine	0.500	0.601	0.667	0.667	75	90	46 - 111	18	25	
Hexachloroethane	0.397	0.553	0.667	0.667	60	83	20 - 120	33	30	L
Nitrobenzene	0.495	0.604	0.667	0.667	74	91	20 - 120	20	30	
Isophorone	0.516	0.605	0.667	0.667	77	91	20 - 120	16	30	
2-Nitrophenol	0.495	0.620	0.667	0.667	74	93	20 - 120	22	30	
2,4-Dimethylphenol	0.655	0.778	0.667	0.667	98	117	20 - 120	17	30	
bis(2-Chloroethoxy)methane	0.509	0.601	0.667	0.667	76	90	20 - 120	17	30	
2,4-Dichlorophenol	0.528	0.598	0.667	0.667	79	90	20 - 120	12	30	
1,2,4-Trichlorobenzene	0.496	0.582	0.667	0.667	74	87	52 - 106	16	28	
Naphthalene	0.502	0.602	0.667	0.667	75	90	20 - 120	18	30	
4-Chloroaniline	0.534	0.600	0.667	0.667	80	90	20 - 120	12	30	
Hexachlorobutadiene	0.503	0.597	0.667	0.667	75	90	20 - 120	17	30	
4-Chloro-3-methylphenol	0.548	0.618	0.667	0.667	82	93	54 - 112	12	20	
2-Methylnaphthalene	0.524	0.603	0.667	0.667	79	90	20 - 120	14	30	
1-Methylnaphthalene	0.491	0.566	0.667	0.667	74	85	20 - 120	14	30	
Hexachlorocyclopentadiene	0.207	0.739	0.667	0.667	31	111	20 - 120	112	30	L
2,4,6-Trichlorophenol	0.553	0.650	0.667	0.667	83	97	20 - 120	16	30	
2,3-Dichloroaniline	0.523	0.629	0.667	0.667	78	94	20 - 120	18	30	
2,4,5-Trichlorophenol	0.560	0.668	0.667	0.667	84	100	20 - 120	18	30	
2-Chloronaphthalene	0.518	0.608	0.667	0.667	78	91	20 - 120	16	30	
2-Nitroaniline	0.568	0.653	0.667	0.667	85	98	20 - 120	14	30	
1,4-Dinitrobenzene	0.522	0.632	0.667	0.667	78	95	20 - 120	19	30	
Dimethylphthalate	0.543	0.622	0.667	0.667	81	93	20 - 120	14	30	
1,3-Dinitrobenzene	0.528	0.635	0.667	0.667	79	95	20 - 120	18	30	
2,6-Dinitrotoluene	0.519	0.634	0.667	0.667	78	95	20 - 120	20	30	
1,2-Dinitrobenzene	0.477	0.528	0.667	0.667	72	79	20 - 120	10	30	
Acenaphthylene	0.519	0.614	0.667	0.667	78	92	20 - 120	17	30	
3-Nitroaniline	0.516	0.587	0.667	0.667	77	88	20 - 120	13	30	



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

**SEMIVOLATILE ORGANICS EPA 8270E/SIM
 QUALITY CONTROL**

page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0927S1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	0.181	0.367	0.667	0.667	27	55	20 - 120	68	30	L
Acenaphthene	0.531	0.611	0.667	0.667	80	92	55 - 101	14	20	
4-Nitrophenol	0.484	0.672	0.667	0.667	73	101	34 - 136	33	22	L
2,4-Dinitrotoluene	0.549	0.654	0.667	0.667	82	98	51 - 111	17	21	
Dibenzofuran	0.535	0.610	0.667	0.667	80	91	20 - 120	13	30	
2,3,5,6-Tetrachlorophenol	0.501	0.566	0.667	0.667	75	85	20 - 120	12	30	
2,3,4,6-Tetrachlorophenol	0.548	0.621	0.667	0.667	82	93	20 - 120	12	30	
Diethylphthalate	0.545	0.618	0.667	0.667	82	93	20 - 120	13	30	
4-Chlorophenyl-phenylether	0.550	0.626	0.667	0.667	82	94	20 - 120	13	30	
4-Nitroaniline	0.549	0.637	0.667	0.667	82	96	20 - 120	15	30	
Fluorene	0.531	0.602	0.667	0.667	80	90	20 - 120	13	30	
4,6-Dinitro-2-methylphenol	0.222	0.506	0.667	0.667	33	76	20 - 120	78	30	L
n-Nitrosodiphenylamine	0.549	0.628	0.667	0.667	82	94	20 - 120	13	30	
1,2-Diphenylhydrazine	0.537	0.621	0.667	0.667	81	93	20 - 120	15	30	
4-Bromophenyl-phenylether	0.552	0.628	0.667	0.667	83	94	20 - 120	13	30	
Hexachlorobenzene	0.550	0.624	0.667	0.667	82	94	20 - 120	13	30	
Pentachlorophenol	0.503	0.496	0.667	0.667	75	74	34 - 134	1	23	
Phenanthrene	0.527	0.608	0.667	0.667	79	91	20 - 120	14	30	
Anthracene	0.565	0.630	0.667	0.667	85	94	20 - 120	11	30	
Carbazole	0.539	0.605	0.667	0.667	81	91	20 - 120	12	30	
Di-n-butylphthalate	0.562	0.652	0.667	0.667	84	98	20 - 120	15	30	
Fluoranthene	0.560	0.639	0.667	0.667	84	96	20 - 120	13	30	
Pyrene	0.517	0.622	0.667	0.667	78	93	53 - 113	18	20	
Butylbenzylphthalate	0.551	0.648	0.667	0.667	83	97	20 - 120	16	30	
bis-2-Ethylhexyladipate	0.562	0.674	0.667	0.667	84	101	20 - 120	18	30	
3,3'-Dichlorobenzidine	0.600	0.669	0.667	0.667	90	100	20 - 120	11	30	
Benzo[a]anthracene	0.534	0.620	0.667	0.667	80	93	20 - 120	15	30	
Chrysene	0.545	0.618	0.667	0.667	82	93	20 - 120	13	30	
bis(2-Ethylhexyl)phthalate	0.583	0.669	0.667	0.667	87	100	20 - 120	14	30	
Di-n-octylphthalate	0.626	0.718	0.667	0.667	94	108	20 - 120	14	30	
Benzo[b]fluoranthene	0.551	0.612	0.667	0.667	83	92	20 - 120	10	30	
Benzo(j,k)fluoranthene	0.565	0.660	0.667	0.667	85	99	20 - 120	16	30	
Benzo[a]pyrene	0.594	0.678	0.667	0.667	89	102	20 - 120	13	30	
Indeno[1,2,3-cd]pyrene	0.586	0.654	0.667	0.667	88	98	20 - 120	11	30	
Dibenz[a,h]anthracene	0.612	0.694	0.667	0.667	92	104	20 - 120	13	30	
Benzo[g,h,i]perylene	0.575	0.656	0.667	0.667	86	98	20 - 120	13	30	
Surrogate:										
2-Fluorophenol					74	89	11 - 111			
Phenol-d6					75	97	26 - 117			
Nitrobenzene-d5					73	90	31 - 111			
2-Fluorobiphenyl					77	92	38 - 109			
2,4,6-Tribromophenol					89	101	27 - 127			
Terphenyl-d14					74	90	37 - 116			



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Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-01					
Laboratory ID:	09-278-01					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	77	50-127				
Client ID:	FS-092623-02					
Laboratory ID:	09-278-02					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	83	50-127				
Client ID:	FS-092623-03					
Laboratory ID:	09-278-03					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	84	50-127				



Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-04					
Laboratory ID:	09-278-04					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	50-127				
Client ID:	FS-092623-05					
Laboratory ID:	09-278-05					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	76	50-127				
Client ID:	FS-092623-06					
Laboratory ID:	09-278-06					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	81	50-127				



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-07					
Laboratory ID:	09-278-07					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	84	50-127				
Client ID:	FS-092623-08					
Laboratory ID:	09-278-08					
Aroclor 1016	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0041	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	83	50-127				
Client ID:	FS-092623-09					
Laboratory ID:	09-278-09					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	84	50-127				



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PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FS-092623-10					
Laboratory ID:	09-278-10					
Aroclor 1016	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1221	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1232	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1242	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1248	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1254	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1260	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1262	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
Aroclor 1268	ND	0.0042	EPA 8082A	9-28-23	9-29-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>88</i>	<i>50-127</i>				



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**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0928S1					
Aroclor 1016	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1221	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1232	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1242	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1248	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1254	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1260	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1262	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Aroclor 1268	ND	0.0040	EPA 8082A	9-28-23	9-28-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	95	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0928S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.379	0.411	0.500	0.500	N/A	76	82	55-119	8	34
Surrogate:										
DCB						74	81	50-127		



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 Project: Jorgenson Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-01						
Laboratory ID: 09-278-01						
Arsenic	1.8	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	6.3	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	3.8	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	14	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.4	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	8.7	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	12	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	15	0.52	EPA 6020B	10-2-23	10-2-23	

Client ID: FS-092623-02						
Laboratory ID: 09-278-02						
Arsenic	2.6	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	14	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	5.8	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	16	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.7	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	16	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	0.14	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	22	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	23	0.52	EPA 6020B	10-2-23	10-2-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-03				
Laboratory ID:		09-278-03				
Arsenic	2.3	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	11	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	5.1	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	15	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.7	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	14	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	18	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	22	0.52	EPA 6020B	10-2-23	10-2-23	

Client ID:		FS-092623-04				
Laboratory ID:		09-278-04				
Arsenic	1.9	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	8.0	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	4.3	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	12	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.5	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	11	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	13	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	18	0.52	EPA 6020B	10-2-23	10-2-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-05				
Laboratory ID:		09-278-05				
Arsenic	1.5	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	5.3	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	3.0	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	9.5	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.4	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	8.3	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	8.3	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	13	0.52	EPA 6020B	10-2-23	10-2-23	

Client ID:		FS-092623-06				
Laboratory ID:		09-278-06				
Arsenic	2.4	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	11	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	5.0	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	16	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.8	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	14	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	0.18	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	17	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	20	0.52	EPA 6020B	10-2-23	10-2-23	



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TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FS-092623-07						
Laboratory ID: 09-278-07						
Arsenic	2.4	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	13	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	4.9	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	17	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.7	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	14	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	18	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	22	0.52	EPA 6020B	10-2-23	10-2-23	

Client ID: FS-092623-08						
Laboratory ID: 09-278-08						
Arsenic	2.2	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	9.6	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	4.8	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	13	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.8	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	13	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	17	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	21	0.52	EPA 6020B	10-2-23	10-2-23	



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 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

TOTAL METALS
EPA 6020B/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FS-092623-09				
Laboratory ID:		09-278-09				
Arsenic	2.3	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	10	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	5.0	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	15	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.5	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	13	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	0.14	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	17	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	22	0.52	EPA 6020B	10-2-23	10-2-23	

Client ID:		FS-092623-10				
Laboratory ID:		09-278-10				
Arsenic	2.4	0.52	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Chromium	11	0.52	EPA 6020B	10-2-23	10-2-23	
Cobalt	5.2	0.13	EPA 6020B	10-2-23	10-2-23	
Copper	15	0.52	EPA 6020B	10-2-23	10-2-23	
Lead	1.8	0.52	EPA 6020B	10-2-23	10-2-23	
Mercury	ND	0.052	EPA 7471B	9-28-23	9-28-23	
Nickel	15	0.52	EPA 6020B	10-2-23	10-2-23	
Selenium	0.14	0.13	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.052	EPA 6020B	10-2-23	10-2-23	
Vanadium	21	0.52	EPA 6020B	10-2-23	10-2-23	
Zinc	24	0.52	EPA 6020B	10-2-23	10-2-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1002SM1					
Arsenic	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Cadmium	ND	0.0500	EPA 6020B	10-2-23	10-2-23	
Chromium	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Cobalt	ND	0.125	EPA 6020B	10-2-23	10-2-23	
Copper	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Lead	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Nickel	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Selenium	ND	0.125	EPA 6020B	10-2-23	10-2-23	
Silver	ND	0.0500	EPA 6020B	10-2-23	10-2-23	
Vanadium	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Zinc	ND	0.500	EPA 6020B	10-2-23	10-2-23	
Laboratory ID:	MB0928S3					
Mercury	ND	0.0500	EPA 7471B	9-28-23	9-28-23	



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**TOTAL METALS
 EPA 6020B/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-278-01							
	ORIG	DUP						
Arsenic	1.69	1.58	NA	NA	NA	NA	7	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	6.03	5.88	NA	NA	NA	NA	3	20
Cobalt	3.58	3.35	NA	NA	NA	NA	6	20
Copper	13.6	13.8	NA	NA	NA	NA	1	20
Lead	1.31	1.17	NA	NA	NA	NA	11	20
Nickel	8.35	7.90	NA	NA	NA	NA	6	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Vanadium	11.2	10.3	NA	NA	NA	NA	8	20
Zinc	14.1	12.9	NA	NA	NA	NA	9	20

Laboratory ID:	09-278-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	09-278-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	103	96.5	100	100	1.69	101	95	75-125	6	20
Cadmium	47.6	44.9	50.0	50.0	ND	95	90	75-125	6	20
Chromium	106	99.0	100	100	6.03	100	93	75-125	6	20
Cobalt	55.0	53.5	50.0	50.0	3.58	103	100	75-125	3	20
Copper	58.0	55.5	50.0	50.0	13.6	89	84	75-125	4	20
Lead	258	245	250	250	1.31	102	98	75-125	5	20
Nickel	103	104	100	100	8.35	95	96	75-125	1	20
Selenium	109	101	100	100	ND	109	101	75-125	8	20
Silver	23.7	22.7	25.0	25.0	ND	95	91	75-125	5	20
Vanadium	58.5	58.5	50.0	50.0	11.2	95	95	75-125	0	20
Zinc	116	110	100	100	14.1	101	96	75-125	5	20

Laboratory ID:	09-278-01									
Mercury	0.500	0.505	0.500	0.500	ND	100	101	80-120	1	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 3, 2023
 Samples Submitted: September 26, 2023
 Laboratory Reference: 2309-278
 Project: Jorgenson Import Fill Sampling

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FS-092623-01	09-278-01	4	9-27-23
FS-092623-02	09-278-02	4	9-27-23
FS-092623-03	09-278-03	4	9-27-23
FS-092623-04	09-278-04	4	9-27-23
FS-092623-05	09-278-05	4	9-27-23
FS-092623-06	09-278-06	4	9-27-23
FS-092623-07	09-278-07	4	9-27-23
FS-092623-08	09-278-08	4	9-27-23
FS-092623-09	09-278-09	5	9-27-23
FS-092623-10	09-278-10	5	9-27-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: OH Environmental		Turnaround Request (in working days) (Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)	
Project Number:		Laboratory Number: 09-278	
Project Name: Doregon Impact Fill Sampling		Number of Containers: _____ NWTPH-HCID NWTPH-Gx/BTEX (8021 ☐ 8260 ☐ NWTPH-Gx NWTPH-Dx (SG Clean-up ☐ Volatiles 8260 Halogenated Volatiles 8260 EDB EPA 8011 (Waters Only) Semivolatiles 8270/SIM (with low-level PAHs) PAHs 8270/SIM (low-level) PCBs 8082 Organochlorine Pesticides 8081 Organophosphorus Pesticides 8270/SIM Chlorinated Acid Herbicides 8151 Total PCB Metals (see list) Total MTCA Metals TCLP Metals HEM (oil and grease) 1664 % Moisture	
Project Manager: D. Hill			
Sampled by: T. Forslund / B. Johnson			
Lab ID	Sample Identification	Date Sampled	Time Sampled
1	FS-092623-01	9-26-23	0930
2	FS-092623-02		0935
3	FS-092623-03		0940
4	FS-092623-04		0945
5	FS-092623-05		0950
6	FS-092623-06		0955
7	FS-092623-07		1000
8	FS-092623-08		1005
9	FS-092623-09		1010
10	FS-092623-10		1015
Signature		Company	Date
[Signature]		OH Env.	9-26-23
Received		OSR	9/26/23
Relinquished			1310
Received			
Relinquished			
Received			
Relinquished			
Reviewed/Date		Reviewed/Date	
Data Package: Standard ☐ Level III ☐ Level IV ☐		Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐	

Comments/Special Instructions
 * As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, V, Zn, and Co.

Date	Ticket	Time	Customer Name	Description	Product Name	Qty	Unit
8/31/2023	150036936	9:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.31	Ton
8/31/2023	150036939	9:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
8/31/2023	150036947	9:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.70	Ton
8/31/2023	150036994	11:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.65	Ton
8/31/2023	150036997	11:16 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.65	Ton
8/31/2023	150037001	11:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.18	Ton
8/31/2023	150037039	12:38 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.42	Ton
8/31/2023	150037048	1:00 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.56	Ton
8/31/2023	150037058	1:24 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.45	Ton
8/31/2023	150037071	2:48 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.14	Ton
8/31/2023	150037073	2:51 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.73	Ton
9/1/2023	150037095	7:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.78	Ton
9/1/2023	150037096	7:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
9/1/2023	150037102	7:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.10	Ton
9/1/2023	150037122	8:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.28	Ton
9/1/2023	150037129	9:03 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.21	Ton
9/1/2023	150037130	9:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.97	Ton
9/1/2023	150037144	10:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.80	Ton
9/1/2023	150037152	10:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.74	Ton
9/1/2023	150037154	10:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.75	Ton
9/1/2023	150037167	11:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.30	Ton
9/1/2023	150037181	12:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.62	Ton
9/1/2023	150037182	12:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.12	Ton
9/6/2023	150037428	8:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.45	Ton
9/6/2023	150037431	8:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
9/6/2023	150037451	9:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.28	Ton
9/6/2023	150037453	9:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.52	Ton
9/6/2023	150037464	10:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.45	Ton
9/6/2023	150037478	11:02 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
9/6/2023	150037483	11:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.69	Ton
9/6/2023	150037491	11:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.48	Ton
9/6/2023	150037493	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.17	Ton
9/6/2023	150037501	12:15 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.63	Ton
9/6/2023	150037515	12:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.81	Ton
9/6/2023	150037524	1:24 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.14	Ton
9/7/2023	150037567	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.62	Ton
9/7/2023	150037568	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.29	Ton
9/7/2023	150037593	8:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.61	Ton
9/7/2023	150037594	8:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.53	Ton
9/7/2023	150037600	8:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.90	Ton
9/7/2023	150037646	10:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.67	Ton
9/7/2023	150037648	10:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.36	Ton
9/7/2023	150037650	10:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.97	Ton
9/7/2023	150037697	11:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.77	Ton
9/7/2023	150037699	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
9/7/2023	150037700	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.01	Ton
9/7/2023	150037734	1:16 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.99	Ton
9/7/2023	150037740	1:45 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.16	Ton
9/7/2023	150037500	1:46 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.81	Ton
9/8/2023	150037803	6:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.78	Ton
9/8/2023	150037807	7:00 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.77	Ton
9/8/2023	150037845	8:43 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.12	Ton
9/8/2023	150037849	8:52 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
9/8/2023	150037889	10:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.64	Ton
9/8/2023	150037890	10:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.74	Ton
9/8/2023	150037941	12:52 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.01	Ton
9/8/2023	150037943	12:55 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.84	Ton
9/11/2023	150038008	7:01 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
9/11/2023	150038009	7:02 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.95	Ton
9/11/2023	150038010	7:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.03	Ton
9/11/2023	150038011	7:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.54	Ton
9/11/2023	150038012	7:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.44	Ton
9/11/2023	150038013	7:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.55	Ton
9/11/2023	150038075	9:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.15	Ton
9/11/2023	150038083	9:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.68	Ton
9/11/2023	150038084	9:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.95	Ton
9/11/2023	150038087	9:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.02	Ton
9/11/2023	150038088	9:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.82	Ton
9/11/2023	150038090	9:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.49	Ton
9/11/2023	150038144	11:02 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
9/11/2023	150038149	11:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
9/11/2023	150038154	11:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.15	Ton
9/11/2023	150038155	11:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.90	Ton
9/11/2023	150038168	11:51 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
9/11/2023	150038173	12:03 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
9/11/2023	150038203	1:08 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.10	Ton
9/11/2023	150038205	1:11 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.67	Ton
9/11/2023	150038210	1:22 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.08	Ton
9/11/2023	150038212	1:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/11/2023	150038217	1:29 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.56	Ton
9/11/2023	150038225	1:58 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	0.00	Ton
9/11/2023	150038228	2:01 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.57	Ton
9/12/2023	150038262	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.64	Ton
9/12/2023	150038263	6:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.98	Ton
9/12/2023	150038264	6:51 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.60	Ton
9/12/2023	150038319	8:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
9/12/2023	150038324	9:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
9/12/2023	150038373	10:33 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.84	Ton
9/12/2023	150038390	10:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.75	Ton
9/12/2023	150038396	11:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
9/12/2023	150038440	12:27 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
9/12/2023	150038451	12:48 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.23	Ton
9/12/2023	150038461	1:04 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
9/13/2023	150038550	7:00 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.16	Ton
9/13/2023	150038558	7:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.47	Ton
9/13/2023	150038559	7:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.76	Ton
9/13/2023	150038561	7:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.78	Ton
9/13/2023	150038568	9:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.93	Ton
9/13/2023	150038626	9:33 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
9/13/2023	150038642	9:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.56	Ton
9/13/2023	150038644	10:01 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.43	Ton
9/13/2023	150038663	10:52 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/13/2023	150038675	11:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
9/13/2023	150038688	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.71	Ton

9/13/2023	150038689	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/13/2023	150038716	12:50 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.83	Ton
9/13/2023	150037826	1:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.29	Ton
9/13/2023	150038075	3:13 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
9/13/2023	150038751	3:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.48	Ton
9/14/2023	150038082	7:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.33	Ton
9/14/2023	150038083	7:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.47	Ton
9/14/2023	150038084	7:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.06	Ton
9/14/2023	150038085	7:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.29	Ton
9/14/2023	150038286	8:00 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.37	Ton
9/14/2023	150038287	8:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
9/14/2023	150038483	8:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.11	Ton
9/14/2023	150038484	8:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.48	Ton
9/14/2023	150038873	9:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.90	Ton
9/14/2023	150038913	10:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.86	Ton
9/14/2023	150038914	10:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.72	Ton
9/14/2023	150038925	10:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.33	Ton
9/14/2023	150038926	10:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.01	Ton
9/14/2023	150038963	12:10 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.76	Ton
9/14/2023	150038966	12:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.15	Ton
9/14/2023	150039008	1:10 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.81	Ton
9/14/2023	150039009	1:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.82	Ton
9/14/2023	150039011	1:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.40	Ton
9/14/2023	150039035	1:59 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.21	Ton
9/15/2023	150039068	6:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.11	Ton
9/15/2023	150039071	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
9/15/2023	150039075	6:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.13	Ton
9/15/2023	150039076	6:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.43	Ton
9/15/2023	150039078	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.79	Ton
9/15/2023	150039123	8:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.80	Ton
9/15/2023	150039124	8:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.71	Ton
9/15/2023	150039127	8:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.20	Ton
9/15/2023	150039134	8:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.53	Ton
9/15/2023	150039135	8:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.09	Ton
9/15/2023	150039141	8:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.31	Ton
9/15/2023	150039193	9:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.33	Ton
9/15/2023	150039194	9:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.57	Ton
9/15/2023	150039196	9:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.24	Ton
9/15/2023	150039204	10:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.03	Ton
9/15/2023	150039205	10:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.98	Ton
9/15/2023	150039227	10:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.96	Ton
9/15/2023	150039250	11:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
9/15/2023	150039263	11:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.66	Ton
9/15/2023	150039261	11:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.79	Ton
9/15/2023	150039275	12:13 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
9/15/2023	150039276	12:13 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.35	Ton
9/15/2023	150039321	12:39 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
9/15/2023	150039304	1:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
9/15/2023	150039331	1:31 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
9/18/2023	150039389	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.72	Ton
9/18/2023	150039391	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
9/18/2023	150039392	6:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.65	Ton
9/18/2023	150039394	6:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.57	Ton
9/18/2023	150039395	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.24	Ton
9/18/2023	150039396	6:51 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.83	Ton
9/18/2023	150039458	8:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
9/18/2023	150039467	8:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.51	Ton
9/18/2023	150039483	9:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.18	Ton
9/18/2023	150039484	9:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.89	Ton
9/18/2023	150039486	9:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.11	Ton
9/18/2023	150039487	9:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.03	Ton
9/18/2023	150039531	10:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	21.82	Ton
9/18/2023	150039548	11:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.90	Ton
9/18/2023	150039549	11:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.22	Ton
9/18/2023	150039552	11:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.79	Ton
9/18/2023	150039562	11:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.89	Ton
9/18/2023	150039587	12:01 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.09	Ton
9/18/2023	150039591	12:07 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
9/18/2023	150039635	1:15 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
9/18/2023	150039651	1:37 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.10	Ton
9/18/2023	150039660	1:46 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.22	Ton
9/18/2023	150039662	1:48 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.89	Ton
9/18/2023	150039663	1:50 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.09	Ton
9/18/2023	150039665	1:53 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.89	Ton
9/19/2023	150039695	6:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.41	Ton
9/19/2023	150039696	6:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.15	Ton
9/19/2023	150039701	6:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.44	Ton
9/19/2023	150039703	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.53	Ton
9/19/2023	150039707	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
9/19/2023	150039709	6:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.39	Ton
9/19/2023	150039710	6:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.82	Ton
9/19/2023	150039743	8:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.69	Ton
9/19/2023	150039747	8:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.94	Ton
9/19/2023	150039749	8:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.10	Ton
9/19/2023	150039761	8:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.07	Ton
9/19/2023	150039762	8:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
9/19/2023	150039771	8:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.57	Ton
9/19/2023	150039773	8:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
9/19/2023	150039807	10:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.11	Ton
9/19/2023	150039809	10:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.93	Ton
9/19/2023	150039817	10:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
9/19/2023	150039818	10:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.92	Ton
9/19/2023	150039819	10:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.66	Ton
9/19/2023	150039836	11:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.05	Ton
9/19/2023	150039861	11:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.26	Ton
9/19/2023	150039862	11:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.44	Ton
9/19/2023	150039868	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.23	Ton
9/19/2023	150039869	11:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
9/19/2023	150039881	12:30 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
9/19/2023	150039882	12:32 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.71	Ton
9/19/2023	150039903	1:08 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.05	Ton
9/19/2023	150039907	1:20 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.46	Ton
9/19/2023	150039908	1:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.90	Ton
9/19/2023	150039911	1:28 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.42	Ton
9/19/2023	150039913	1:31 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.41	Ton

9/20/2023	150039963	6:39 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.08	Ton
9/20/2023	150039964	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.57	Ton
9/20/2023	150039966	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/20/2023	150039967	6:44 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.03	Ton
9/20/2023	150039968	6:44 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.36	Ton
9/20/2023	150039970	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
9/20/2023	150039972	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.21	Ton
9/20/2023	150039973	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.73	Ton
9/20/2023	150040047	8:57 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.41	Ton
9/20/2023	150040061	9:19 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.21	Ton
9/20/2023	150040063	9:21 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.63	Ton
9/20/2023	150040065	9:22 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.44	Ton
9/20/2023	150040076	9:33 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.76	Ton
9/20/2023	150040077	9:33 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/20/2023	150040079	9:39 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.57	Ton
9/20/2023	150040082	9:42 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.10	Ton
9/20/2023	150040133	11:00 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	32.21	Ton
9/20/2023	150040139	11:06 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.00	Ton
9/20/2023	150040151	11:17 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.28	Ton
9/20/2023	150040152	11:18 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.82	Ton
9/20/2023	150040177	11:35 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.53	Ton
9/20/2023	150040185	11:45 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.01	Ton
9/20/2023	150040187	11:48 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.46	Ton
9/20/2023	150040189	11:51 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.35	Ton
9/20/2023	150040233	12:47 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.05	Ton
9/20/2023	150042242	1:00 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.47	Ton
9/20/2023	150042244	1:03 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.53	Ton
9/20/2023	150042246	1:05 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.42	Ton
9/20/2023	150042268	1:29 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.30	Ton
9/20/2023	150042270	1:32 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.90	Ton
9/20/2023	150042282	1:42 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.02	Ton
9/20/2023	150042841	1:43 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.21	Ton
9/20/2023	150043015	2:37 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.78	Ton
9/20/2023	150043233	2:55 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.02	Ton
9/21/2023	150043544	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.60	Ton
9/21/2023	150043600	6:49 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.15	Ton
9/21/2023	150043889	7:27 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.70	Ton
9/21/2023	150044449	9:22 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
9/21/2023	150045051	9:23 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
9/21/2023	150040473	9:47 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
9/21/2023	150045366	11:29 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.08	Ton
9/21/2023	150045367	11:31 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
9/21/2023	150045600	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.29	Ton
9/21/2023	150046268	1:25 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.97	Ton
9/21/2023	150046300	1:26 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.89	Ton
9/21/2023	150046040	1:36 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.47	Ton
9/22/2023	150047017	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.08	Ton
9/22/2023	150047186	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.38	Ton
9/22/2023	150047231	6:48 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.51	Ton
9/22/2023	150047652	7:48 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.01	Ton
9/22/2023	150048086	8:53 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.92	Ton
9/22/2023	150048087	8:53 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.18	Ton
9/22/2023	150048089	8:56 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.74	Ton
9/22/2023	150048382	9:30 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.08	Ton
9/22/2023	150048070	10:32 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.77	Ton
9/22/2023	150048084	10:33 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.34	Ton
9/22/2023	150048870	10:55 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.84	Ton
9/22/2023	150048886	11:02 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.75	Ton
9/22/2023	150049398	12:23 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.90	Ton
9/22/2023	150049393	12:24 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.44	Ton
9/22/2023	150049593	12:45 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.73	Ton
9/25/2023	150041138	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.51	Ton
9/25/2023	150041140	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.41	Ton
9/25/2023	150041143	6:37 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.96	Ton
9/25/2023	150041445	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.15	Ton
9/25/2023	150041155	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.47	Ton
9/25/2023	150041157	6:52 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.03	Ton
9/25/2023	150041224	8:44 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.73	Ton
9/25/2023	150041233	9:00 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.44	Ton
9/25/2023	150041234	9:02 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.86	Ton
9/25/2023	150041267	9:44 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.35	Ton
9/25/2023	150041269	9:45 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
9/25/2023	150041270	9:47 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.32	Ton
9/25/2023	150041309	10:42 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
9/25/2023	150041320	10:52 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.07	Ton
9/25/2023	150041328	10:58 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.63	Ton
9/25/2023	150041365	11:32 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.86	Ton
9/25/2023	150041366	11:33 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.75	Ton
9/25/2023	150041367	11:35 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.23	Ton
9/25/2023	150041399	12:16 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.89	Ton
9/25/2023	150041449	1:13 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.87	Ton
9/25/2023	150041450	1:14 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.69	Ton
9/25/2023	150041451	1:17 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.35	Ton
9/25/2023	150041453	1:18 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.60	Ton
9/25/2023	150041482	1:59 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.80	Ton
9/26/2023	150041544	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.39	Ton
9/26/2023	150041546	6:51 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.58	Ton
9/26/2023	150041542	6:56 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.93	Ton
9/26/2023	150041553	6:57 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.52	Ton
9/26/2023	150041554	6:58 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.51	Ton
9/26/2023	150041556	7:00 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.01	Ton
9/26/2023	150041605	8:53 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.56	Ton
9/26/2023	150041615	9:08 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.70	Ton
9/26/2023	150041617	9:10 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.97	Ton
9/26/2023	150041619	9:12 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.70	Ton
9/26/2023	150041627	9:26 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.89	Ton
9/26/2023	150041642	9:46 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.96	Ton
9/26/2023	150041671	10:32 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.05	Ton
9/26/2023	150041679	10:44 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.27	Ton
9/26/2023	150041693	11:19 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.18	Ton
9/26/2023	150041695	11:24 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.05	Ton
9/26/2023	150041707	11:53 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.46	Ton
9/26/2023	150041708	11:56 AM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.93	Ton
9/26/2023	150041722	12:16 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.76	Ton
9/26/2023	150041736	12:24 PM	CONSTRUCTIONGROUPINTERNATIONALLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.84	Ton

9/26/2023	150041750	1:17 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.67	Ton
9/26/2023	150041752	1:18 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
9/26/2023	150041770	1:54 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.96	Ton
9/27/2023	150041810	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
9/27/2023	150041812	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.14	Ton
9/27/2023	150041814	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.10	Ton
9/27/2023	150041818	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.73	Ton
9/27/2023	150041821	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.01	Ton
9/27/2023	150041873	6:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.33	Ton
9/27/2023	150041891	8:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.46	Ton
9/27/2023	150041893	8:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.76	Ton
9/27/2023	150041900	9:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.02	Ton
9/27/2023	150041903	9:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.15	Ton
9/27/2023	150041902	9:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.92	Ton
9/27/2023	150041908	9:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.73	Ton
9/27/2023	150041972	11:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.97	Ton
9/27/2023	150041974	11:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.16	Ton
9/27/2023	150041983	11:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.55	Ton
9/27/2023	150042005	11:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.12	Ton
9/27/2023	150042006	11:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
9/27/2023	150042008	12:01 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
9/27/2023	150042010	12:05 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
9/27/2023	150042041	12:58 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.39	Ton
9/27/2023	150042049	1:29 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.74	Ton
9/27/2023	150042050	1:19 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.87	Ton
9/27/2023	150042060	1:40 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.56	Ton
9/27/2023	150042064	1:40 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
9/27/2023	150042065	1:41 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
9/27/2023	150042078	2:04 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.98	Ton
9/28/2023	150042145	7:02 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.07	Ton
9/28/2023	150042147	7:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.05	Ton
9/28/2023	150042149	7:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.35	Ton
9/28/2023	150042151	7:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.05	Ton
9/28/2023	150042154	7:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.57	Ton
9/28/2023	150042155	7:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.92	Ton
9/28/2023	150042158	7:16 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.03	Ton
9/28/2023	150042160	7:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.65	Ton
9/28/2023	150042217	9:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.64	Ton
9/28/2023	150042218	9:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.78	Ton
9/28/2023	150042220	9:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.59	Ton
9/28/2023	150042236	9:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.45	Ton
9/28/2023	150042242	10:02 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
9/28/2023	150042244	10:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.68	Ton
9/28/2023	150042245	10:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.36	Ton
9/28/2023	150042246	10:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.44	Ton
9/28/2023	150042270	11:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.33	Ton
9/28/2023	150042271	11:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.30	Ton
9/28/2023	150042277	11:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.17	Ton
9/28/2023	150042284	11:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.27	Ton
9/28/2023	150042285	11:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
9/28/2023	150042288	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.72	Ton
9/28/2023	150042293	12:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
9/28/2023	150042295	12:42 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.14	Ton
9/28/2023	150042303	1:01 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.01	Ton
9/28/2023	150042307	1:09 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.62	Ton
9/28/2023	150042310	1:17 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.00	Ton
9/28/2023	150042314	1:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.71	Ton
9/28/2023	150042319	1:39 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.40	Ton
9/28/2023	150042326	1:59 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.95	Ton
9/28/2023	150042337	2:36 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.96	Ton
10/2/2023	150042547	6:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.87	Ton
10/2/2023	150042549	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	25.42	Ton
10/2/2023	150042551	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.30	Ton
10/2/2023	150042553	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.48	Ton
10/2/2023	150042554	6:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.38	Ton
10/2/2023	150042555	6:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.61	Ton
10/2/2023	150042556	6:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.16	Ton
10/2/2023	150042560	6:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.43	Ton
10/2/2023	150042595	8:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.35	Ton
10/2/2023	150042602	8:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.89	Ton
10/2/2023	150042607	8:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.21	Ton
10/2/2023	150042609	8:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.12	Ton
10/2/2023	150042611	8:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.84	Ton
10/2/2023	150042612	8:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.42	Ton
10/2/2023	150042625	9:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.34	Ton
10/2/2023	150042627	9:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
10/2/2023	150042654	10:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
10/2/2023	150042656	10:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.59	Ton
10/2/2023	150042660	10:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.26	Ton
10/2/2023	150042661	10:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.03	Ton
10/2/2023	150042662	10:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.43	Ton
10/2/2023	150042674	10:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.08	Ton
10/2/2023	150042702	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.98	Ton
10/2/2023	150042703	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.76	Ton
10/2/2023	150042706	12:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.38	Ton
10/2/2023	150042708	12:15 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.35	Ton
10/2/2023	150042709	12:17 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.91	Ton
10/2/2023	150042711	12:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.94	Ton
10/2/2023	150042715	12:33 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.86	Ton
10/2/2023	150042722	12:51 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
10/2/2023	150042734	1:39 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.60	Ton
10/3/2023	150042757	6:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.80	Ton
10/3/2023	150042759	6:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.40	Ton
10/3/2023	150042761	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.72	Ton
10/3/2023	150042763	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.34	Ton
10/3/2023	150042765	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
10/3/2023	150042770	6:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.47	Ton
10/3/2023	150042772	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.14	Ton
10/3/2023	150042781	6:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.88	Ton
10/3/2023	150042783	6:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.01	Ton
10/3/2023	150042814	8:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.03	Ton
10/3/2023	150042823	8:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.41	Ton
10/3/2023	150042825	8:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.42	Ton
10/3/2023	150042826	8:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.03	Ton
10/3/2023	150042835	8:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.61	Ton

10/3/2023	150042843	9:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.49	Ton
10/3/2023	150042844	9:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.64	Ton
10/3/2023	150042857	9:43 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.88	Ton
10/3/2023	150042863	9:52 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
10/3/2023	150042869	10:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.50	Ton
10/3/2023	150042894	10:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
10/3/2023	150042895	10:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.98	Ton
10/3/2023	150042900	11:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.06	Ton
10/3/2023	150042911	11:37 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.40	Ton
10/3/2023	150042912	11:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.95	Ton
10/3/2023	150042915	11:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.84	Ton
10/3/2023	150042925	12:03 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.27	Ton
10/3/2023	150042928	12:07 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.72	Ton
10/3/2023	150042961	12:55 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.23	Ton
10/3/2023	150042963	12:57 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.31	Ton
10/3/2023	150042965	12:59 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.44	Ton
10/3/2023	150042971	1:06 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.56	Ton
10/3/2023	150042977	1:22 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.86	Ton
10/3/2023	150042979	1:24 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.51	Ton
10/3/2023	150042989	1:38 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.90	Ton
10/4/2023	150043023	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.52	Ton
10/4/2023	150043025	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.05	Ton
10/4/2023	150043026	6:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.65	Ton
10/4/2023	150043028	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.12	Ton
10/4/2023	150043029	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.65	Ton
10/4/2023	150043031	6:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.64	Ton
10/4/2023	150043035	6:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.59	Ton
10/4/2023	150043064	8:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.87	Ton
10/4/2023	150043067	8:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.26	Ton
10/4/2023	150043072	8:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.68	Ton
10/4/2023	150043074	8:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.74	Ton
10/4/2023	150043078	9:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
10/4/2023	150043079	9:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
10/4/2023	150043094	9:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.15	Ton
10/4/2023	150043114	10:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.31	Ton
10/4/2023	150043121	10:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.38	Ton
10/4/2023	150043128	11:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.43	Ton
10/4/2023	150043141	11:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.49	Ton
10/4/2023	150043142	11:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.57	Ton
10/4/2023	150043161	12:20 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.79	Ton
10/4/2023	150043166	12:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.40	Ton
10/4/2023	150043178	12:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.84	Ton
10/4/2023	150043180	12:53 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
10/4/2023	150043187	1:07 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.20	Ton
10/4/2023	150043195	1:22 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.83	Ton
10/4/2023	150043196	1:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.88	Ton
10/4/2023	150043204	1:44 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.46	Ton
10/4/2023	150043212	2:11 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.30	Ton
10/5/2023	150043235	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.01	Ton
10/5/2023	150043237	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.26	Ton
10/5/2023	150043238	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.37	Ton
10/5/2023	150043241	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.24	Ton
10/5/2023	150043242	6:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.93	Ton
10/5/2023	150043243	6:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.08	Ton
10/5/2023	150043244	7:00 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.18	Ton
10/5/2023	150043249	7:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.39	Ton
10/5/2023	150043251	7:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.09	Ton
10/5/2023	150043272	8:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.83	Ton
10/5/2023	150043273	8:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.53	Ton
10/5/2023	150043275	8:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.22	Ton
10/5/2023	150043283	9:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.84	Ton
10/5/2023	150043286	9:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.46	Ton
10/5/2023	150043287	9:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.58	Ton
10/5/2023	150043313	10:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.05	Ton
10/5/2023	150043314	10:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.46	Ton
10/5/2023	150043317	10:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
10/5/2023	150043318	10:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.46	Ton
10/5/2023	150043323	10:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.18	Ton
10/5/2023	150043340	11:43 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.14	Ton
10/5/2023	150043341	11:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.45	Ton
10/5/2023	150043346	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.18	Ton
10/5/2023	150043349	12:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
10/5/2023	150043356	12:26 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.24	Ton
10/5/2023	150043357	12:27 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.44	Ton
10/5/2023	150043363	12:41 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.14	Ton
10/5/2023	150043387	1:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.51	Ton
10/5/2023	150043389	1:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.99	Ton
10/5/2023	150043390	1:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.54	Ton
10/5/2023	150043404	2:52 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.24	Ton
10/23/2023	150045654	6:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
10/23/2023	150045656	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.70	Ton
10/23/2023	150045657	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
10/23/2023	150045688	7:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.85	Ton
10/23/2023	150045723	8:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.41	Ton
10/23/2023	150045753	9:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.70	Ton
10/23/2023	150045753	9:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.43	Ton
10/23/2023	150045758	9:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.62	Ton
10/23/2023	150045799	10:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.00	Ton
10/23/2023	150045820	11:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.35	Ton
10/23/2023	150045823	11:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.40	Ton
10/23/2023	150045844	11:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.21	Ton
10/23/2023	150045861	12:07 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.48	Ton
10/23/2023	150045890	12:55 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
10/23/2023	150045898	1:09 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.01	Ton
10/23/2023	150045900	1:11 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.30	Ton
10/23/2023	150045901	1:56 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.20	Ton
10/24/2023	150045967	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.78	Ton
10/24/2023	150045992	7:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
10/24/2023	150045994	7:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
10/24/2023	150046014	7:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.00	Ton
10/24/2023	150046044	8:37 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.88	Ton
10/24/2023	150046117	10:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.64	Ton
10/24/2023	150046118	10:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.37	Ton
10/24/2023	150046120	10:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.28	Ton
10/24/2023	150046136	10:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.02	Ton

10/24/2023	150046212	12:15 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.69	Ton
10/24/2023	150046214	12:17 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.03	Ton
10/24/2023	150046215	12:18 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
10/24/2023	150046246	1:09 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.37	Ton
10/24/2023	150046283	2:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.45	Ton
10/25/2023	150046312	6:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.68	Ton
10/25/2023	150046313	6:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.72	Ton
10/25/2023	150046314	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.38	Ton
10/25/2023	150046414	9:03 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.88	Ton
10/25/2023	150046419	9:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.73	Ton
10/25/2023	150046428	9:16 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
10/25/2023	150046475	10:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.82	Ton
10/25/2023	150046528	11:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.32	Ton
10/25/2023	150046530	11:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.92	Ton
10/25/2023	150046541	11:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.10	Ton
10/25/2023	150046566	11:50 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.93	Ton
10/25/2023	150046617	12:52 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.59	Ton
10/25/2023	150046618	12:54 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.12	Ton
10/25/2023	150046645	1:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.44	Ton
10/25/2023	150046647	1:28 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.44	Ton
10/26/2023	150046707	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
10/26/2023	150046708	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
10/26/2023	150046719	7:01 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.25	Ton
10/26/2023	150046831	9:43 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.25	Ton
10/26/2023	150046837	9:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.26	Ton
10/26/2023	150046842	9:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.63	Ton
10/26/2023	150046874	10:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.28	Ton
10/26/2023	150046894	11:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
10/26/2023	150046911	11:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.38	Ton
10/26/2023	150046953	12:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.51	Ton
10/26/2023	150046955	12:26 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.03	Ton
10/26/2023	150046974	12:50 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.34	Ton
10/26/2023	150046987	1:19 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.94	Ton
10/27/2023	150047043	6:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	25.63	Ton
10/27/2023	150047044	6:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.37	Ton
10/27/2023	150047051	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.17	Ton
10/27/2023	150047064	7:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.99	Ton
10/27/2023	150047112	8:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.20	Ton
10/27/2023	150047117	9:03 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.29	Ton
10/27/2023	150047122	9:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.25	Ton

11/6/2023	150049149	1:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.68	Ton
11/6/2023	150049151	1:22 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.03	Ton
11/6/2023	150049160	1:39 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.70	Ton
11/6/2023	150049175	2:18 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.18	Ton
11/7/2023	150049179	6:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.99	Ton
11/7/2023	150049211	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.55	Ton
11/7/2023	150049216	6:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.03	Ton
11/7/2023	150049221	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.00	Ton
11/7/2023	150049230	7:01 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.60	Ton
11/7/2023	150049289	8:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
11/7/2023	150049298	8:37 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.72	Ton
11/7/2023	150049306	8:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.28	Ton
11/7/2023	150049307	8:50 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.54	Ton
11/7/2023	150049322	9:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.59	Ton
11/7/2023	150049386	10:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.44	Ton
11/7/2023	150049394	10:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.77	Ton
11/7/2023	150049405	10:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.66	Ton
11/7/2023	150049418	11:09 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.99	Ton
11/7/2023	150049434	11:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.85	Ton
11/7/2023	150049445	12:02 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.75	Ton
11/7/2023	150049482	12:34 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	31.25	Ton
11/7/2023	150049495	12:54 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.71	Ton
11/7/2023	150049496	1:25 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.82	Ton
11/7/2023	150049507	1:16 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.66	Ton
11/7/2023	150049532	1:57 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
11/8/2023	150049584	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.21	Ton
11/8/2023	150049585	6:50 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.02	Ton
11/8/2023	150049586	6:51 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.84	Ton
11/8/2023	150049587	6:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.28	Ton
11/8/2023	150049589	6:56 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
11/8/2023	150049579	9:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.52	Ton
11/8/2023	150049680	9:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.16	Ton
11/8/2023	150049687	9:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.77	Ton
11/8/2023	150049693	9:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.05	Ton
11/8/2023	150049694	9:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	25.47	Ton
11/8/2023	150049777	11:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.56	Ton
11/8/2023	150049779	11:17 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.95	Ton
11/8/2023	150049780	11:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.88	Ton
11/8/2023	150049782	11:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.23	Ton
11/8/2023	150049789	11:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.24	Ton
11/8/2023	150049867	1:06 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.21	Ton
11/8/2023	150049869	1:09 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
11/8/2023	150049878	1:23 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.59	Ton
11/8/2023	150049879	1:26 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.98	Ton
11/21/2023	150051980	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.15	Ton
11/21/2023	150052048	9:07 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.75	Ton
11/21/2023	150052121	11:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.08	Ton
11/21/2023	150052171	1:44 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.53	Ton
11/28/2023	150052501	6:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.36	Ton
11/28/2023	150052584	10:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.63	Ton
11/28/2023	150052642	1:09 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
11/29/2023	150052676	6:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.33	Ton
11/29/2023	150052723	8:51 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.12	Ton
11/29/2023	150052769	10:57 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.35	Ton
11/29/2023	150052817	12:56 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.75	Ton
12/6/2023	150054081	6:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
12/6/2023	150054481	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.03	Ton
12/6/2023	150055533	11:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.17	Ton
12/6/2023	150055534	11:15 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.72	Ton
12/6/2023	150055546	1:45 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.06	Ton
12/6/2023	150055547	1:46 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.60	Ton
12/27/2023	150055562	6:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.71	Ton
12/27/2023	150055563	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.59	Ton
12/27/2023	150055612	9:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
12/27/2023	150055613	9:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.18	Ton
12/27/2023	150055644	11:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
12/27/2023	150055657	12:03 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
12/27/2023	150055678	1:18 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
1/25/2024	150055986	10:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.59	Ton
1/25/2024	150055998	10:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.64	Ton
1/25/2024	150059691	11:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.11	Ton
1/25/2024	150059694	12:38 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
1/25/2024	150059741	2:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
1/26/2024	150059756	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.77	Ton
1/26/2024	150059758	6:34 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.73	Ton
1/26/2024	150059793	7:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.33	Ton
1/26/2024	150059812	8:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
1/26/2024	150059813	8:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.32	Ton
1/26/2024	150059856	9:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.47	Ton
1/26/2024	150059904	10:38 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.11	Ton
1/26/2024	150059910	10:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.71	Ton
1/26/2024	150059931	11:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.08	Ton
1/26/2024	150059975	12:11 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.23	Ton
1/26/2024	150059978	12:13 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.15	Ton
1/26/2024	150060007	1:13 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
1/26/2024	150060025	1:45 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.35	Ton
1/26/2024	150060026	1:47 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.32	Ton
1/29/2024	150060057	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
1/29/2024	150060058	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.07	Ton
1/29/2024	150060059	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.97	Ton
1/29/2024	150060109	8:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.44	Ton
1/29/2024	150060113	8:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.14	Ton
1/29/2024	150060114	8:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.89	Ton
1/29/2024	150060198	10:33 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.61	Ton
1/29/2024	150060200	10:37 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.01	Ton
1/29/2024	150060213	10:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.87	Ton
1/29/2024	150060295	12:56 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.20	Ton
1/29/2024	150060303	1:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.93	Ton
1/29/2024	150060326	1:45 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.49	Ton
1/30/2024	150060347	6:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.53	Ton
1/30/2024	150060348	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
1/30/2024	150060349	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.73	Ton
1/30/2024	150060382	8:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.66	Ton
1/30/2024	150060385	8:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.09	Ton
1/30/2024	150060388	8:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.44	Ton

1/30/2024	150060389	8:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
1/30/2024	150060420	10:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.35	Ton
1/30/2024	150060428	10:41 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.33	Ton
1/30/2024	150060439	11:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.02	Ton
1/30/2024	150060440	11:04 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.71	Ton
1/30/2024	150060475	12:29 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.76	Ton
1/30/2024	150060480	12:33 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
1/30/2024	150060489	12:43 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.22	Ton
1/30/2024	150060495	12:51 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.55	Ton
1/31/2024	150060540	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.47	Ton
1/31/2024	150060547	6:43 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.79	Ton
1/31/2024	150060571	7:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.65	Ton
1/31/2024	150060595	8:39 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.01	Ton
1/31/2024	150060617	9:13 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
1/31/2024	150060618	9:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.53	Ton
1/31/2024	150060652	10:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
1/31/2024	150060691	11:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.71	Ton
1/31/2024	150060693	11:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.22	Ton
1/31/2024	150060725	12:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.32	Ton
1/31/2024	150060753	1:16 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.63	Ton
1/31/2024	150060755	1:20 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.32	Ton
2/1/2024	150060781	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.38	Ton
2/1/2024	150060784	6:36 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	0.00	Ton
2/1/2024	150060785	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.28	Ton
2/1/2024	150060791	6:48 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.95	Ton
2/1/2024	150060834	8:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
2/1/2024	150060840	8:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.99	Ton
2/1/2024	150060849	8:58 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.69	Ton
2/1/2024	150060908	10:53 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.01	Ton
2/1/2024	150060918	11:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.52	Ton
2/1/2024	150060921	11:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.18	Ton
2/1/2024	150060945	12:30 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.65	Ton
2/1/2024	150060951	12:47 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.11	Ton
2/1/2024	150060954	12:55 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.56	Ton
2/1/2024	150060976	2:26 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.36	Ton
2/2/2024	150060986	6:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.39	Ton
2/2/2024	150060988	6:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.80	Ton
2/2/2024	150061008	7:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.34	Ton
2/2/2024	150061052	8:33 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.13	Ton
2/2/2024	150061058	8:42 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.34	Ton
2/2/2024	150061076	9:14 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.99	Ton
2/2/2024	150061095	10:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.51	Ton
2/2/2024	150061121	10:49 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.61	Ton
2/2/2024	150061134	11:11 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.82	Ton
2/2/2024	150061156	12:12 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.36	Ton
2/2/2024	150061179	12:58 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	24.56	Ton
2/2/2024	150061184	1:02 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.96	Ton
2/2/2024	150061185	1:03 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.40	Ton
2/5/2024	150061311	9:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	24.16	Ton
3/5/2024	150061452	1:27 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.18	Ton
2/6/2024	150061557	8:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	24.09	Ton
2/6/2024	150061667	11:45 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.01	Ton
2/7/2024	150061826	10:31 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	23.09	Ton
2/9/2024	150061216	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.73	Ton
2/9/2024	150061324	6:40 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.06	Ton
2/9/2024	150061252	7:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.92	Ton
2/9/2024	150061169	8:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.71	Ton
2/9/2024	150061176	8:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.09	Ton
2/9/2024	150062075	9:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.39	Ton
2/9/2024	150062212	9:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.11	Ton
2/9/2024	150062129	10:00 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.37	Ton
3/9/2024	150062251	11:06 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.80	Ton
2/9/2024	150062257	11:21 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.50	Ton
2/9/2024	150062262	11:32 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.00	Ton
2/9/2024	150062301	12:57 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.65	Ton
2/9/2024	150062302	1:06 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.34	Ton
2/9/2024	150062312	1:31 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.91	Ton
2/12/2024	150062345	6:20 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.12	Ton
2/12/2024	150062348	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.17	Ton
2/12/2024	150062357	6:59 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.98	Ton
2/12/2024	150062407	8:19 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.88	Ton
2/12/2024	150062409	8:26 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.68	Ton
2/12/2024	150062423	9:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.57	Ton
3/12/2024	150062448	10:08 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.33	Ton
2/12/2024	150062450	10:10 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.84	Ton
2/12/2024	150062463	10:46 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.22	Ton
2/12/2024	150062491	10:21 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
2/12/2024	150062492	12:03 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.63	Ton
2/12/2024	150062518	1:14 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.10	Ton
2/12/2024	150062531	1:35 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.28	Ton
2/12/2024	150062553	1:37 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.00	Ton
2/13/2024	150062562	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.97	Ton
2/13/2024	150062563	6:28 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.00	Ton
2/13/2024	150062570	6:47 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.59	Ton
2/13/2024	150062609	8:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.41	Ton
3/13/2024	150062612	8:30 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.17	Ton
2/13/2024	150062614	8:35 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.10	Ton
2/13/2024	150062656	10:18 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.41	Ton
2/13/2024	150062660	10:23 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.23	Ton
2/13/2024	150062676	10:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.94	Ton
2/13/2024	150062714	11:54 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.76	Ton
2/13/2024	150062715	11:55 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.12	Ton
2/13/2024	150062725	12:16 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.01	Ton
2/13/2024	150062758	1:46 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.81	Ton
2/13/2024	150062759	1:57 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.95	Ton
2/13/2024	150062760	2:00 PM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.24	Ton
2/14/2024	150062775	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	25.61	Ton
3/14/2024	150062778	6:29 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.96	Ton
2/14/2024	150062781	6:33 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	25.62	Ton
2/14/2024	150062830	8:24 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.78	Ton
2/14/2024	150062831	8:27 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.48	Ton
2/14/2024	150062863	10:05 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.07	Ton
2/14/2024	150062865	10:12 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.60	Ton
2/14/2024	150062880	10:44 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.92	Ton
2/14/2024	150062896	11:52 AM	CONSTRUCTIONGROUPINTERNATIONALLLC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.87	Ton

2/27/2024	150064414	6:42 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.11	Ton
2/27/2024	150064422	7:00 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.82	Ton
2/27/2024	150064453	8:44 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.08	Ton
2/27/2024	150064457	8:46 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.00	Ton
2/27/2024	150064465	9:10 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.30	Ton
2/27/2024	150064466	9:24 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.91	Ton
2/27/2024	150064495	10:37 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.94	Ton
2/27/2024	150064498	10:43 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.88	Ton
2/27/2024	150064501	10:48 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.76	Ton
2/27/2024	150064506	11:06 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.96	Ton
2/27/2024	150064534	12:28 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.92	Ton
2/27/2024	150064550	12:29 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.38	Ton
2/27/2024	150064554	12:38 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
2/27/2024	150064558	12:57 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.40	Ton
2/27/2024	150064576	1:53 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.42	Ton
2/27/2024	150064583	2:30 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.07	Ton
2/27/2024	150064584	2:37 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.07	Ton
2/27/2024	150064591	3:05 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.31	Ton
2/28/2024	150064600	6:20 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.51	Ton
2/28/2024	150064601	6:22 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.80	Ton
2/28/2024	150064603	6:26 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.76	Ton
2/28/2024	150064607	6:35 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.76	Ton
2/28/2024	150064610	6:44 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.02	Ton
2/28/2024	150064653	8:33 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.69	Ton
2/28/2024	150064659	8:44 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.74	Ton
2/28/2024	150064660	8:46 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.31	Ton
2/28/2024	150064662	8:49 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.38	Ton
2/28/2024	150064678	9:22 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.11	Ton
2/28/2024	150064700	10:36 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.42	Ton
2/28/2024	150064720	11:04 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.47	Ton
2/28/2024	150064722	11:19 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.07	Ton
2/28/2024	150064723	11:22 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.71	Ton
2/28/2024	150064724	11:24 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.05	Ton
2/28/2024	150064749	12:21 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.32	Ton
2/28/2024	150064758	12:24 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.91	Ton
2/28/2024	150064775	1:17 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.53	Ton
2/28/2024	150064777	1:19 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.61	Ton
2/28/2024	150064788	1:22 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.19	Ton
2/28/2024	150064785	1:59 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.09	Ton
2/29/2024	150064801	6:21 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.35	Ton
2/29/2024	150064803	6:23 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.23	Ton
2/29/2024	150064805	6:25 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.99	Ton
2/29/2024	150064806	6:26 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
2/29/2024	150064811	6:35 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.40	Ton
2/29/2024	150064882	8:23 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.06	Ton
2/29/2024	150064857	8:30 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.64	Ton
2/29/2024	150064859	8:34 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.58	Ton
2/29/2024	150064867	8:46 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.23	Ton
2/29/2024	150064878	9:17 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.63	Ton
2/29/2024	150064898	10:17 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.74	Ton
2/29/2024	150064901	10:21 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.78	Ton
2/29/2024	150064906	10:29 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.36	Ton
2/29/2024	150064912	10:43 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.29	Ton
2/29/2024	150064928	11:17 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.39	Ton
2/29/2024	150064952	12:00 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.87	Ton
2/29/2024	150064954	12:01 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.98	Ton
2/29/2024	150064978	12:40 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.01	Ton
2/29/2024	150064979	12:41 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.78	Ton
2/29/2024	150064980	12:43 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.20	Ton
2/29/2024	150064994	1:26 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.20	Ton
2/29/2024	150064997	1:34 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.03	Ton
2/29/2024	150065005	3:04 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.08	Ton
3/1/2024	150065014	6:26 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.91	Ton
3/1/2024	150065015	6:27 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.06	Ton
3/1/2024	150065016	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.04	Ton
3/1/2024	150065017	6:30 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.25	Ton
3/1/2024	150065019	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.45	Ton
3/1/2024	150065020	6:32 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.14	Ton
3/1/2024	150065047	8:10 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.08	Ton
3/1/2024	150065050	8:11 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.38	Ton
3/1/2024	150065055	8:40 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.04	Ton
3/1/2024	150065058	8:43 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.18	Ton
3/1/2024	150065067	9:04 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
3/1/2024	150065076	9:24 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.72	Ton
3/1/2024	150065078	9:39 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.84	Ton
3/1/2024	150065079	9:41 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.31	Ton
3/1/2024	150065100	10:25 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.57	Ton
3/1/2024	150065101	10:25 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.50	Ton
3/1/2024	150065105	10:33 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.19	Ton
3/1/2024	150065117	11:03 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.93	Ton
3/5/2024	150063967	10:03 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.35	Ton
3/5/2024	150063967	11:40 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	27.40	Ton
3/5/2024	15006426	1:32 PM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	26.80	Ton
3/6/2024	150064546	6:18 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.39	Ton
3/6/2024	150064547	6:19 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.54	Ton
3/6/2024	150064557	8:12 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	28.02	Ton
3/6/2024	15006538	8:24 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.55	Ton
3/6/2024	150065611	10:13 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	30.28	Ton
3/6/2024	150065613	10:14 AM	CONSTRUCTIONGROUPINTERNATIONALLCC	JORGENSEN FORGE (FOB)	1 1/4" - 0" CRUSHED ROCK	29.39	Ton
Total:						29,578.91	

Control Density Fill Specifications



Heidelberg Materials North America
7554 185th Ave NE
Suite 100
PO Box 97038
Redmond, WA 98073-9738

11/09/2023

CONSTRUCTION GROUP INTERNATIONAL

Project: Jorgensen Steel Press Pits –

Mark,

Heidelberg Materials proposes to deliver the following concrete mix designs for the above referenced project:

Mix	Use	Slump	Air	W/CM	Specified Strength
PFLO5A PRO FLOW 5 HR	CDF	9-11\10	12	2.97	psi @ 28 Days

Upon approval, kindly return a copy of the approved submittal to Heidelberg Materials. Early notification of the testing laboratory responsible for this project to include Heidelberg Materials on its report distribution mailing list is appreciated. Heidelberg Materials continually monitors the status of each project, sometimes providing that data for future projects.

Heidelberg Materials cannot control and therefore cannot be responsible for the plastic properties of concrete beyond the end of the truck chute.

To access Environmental Product Declarations (EPD's) web search ASTM Heidelberg Materials EPD's. Any mix design not found can be generated upon request.

For any additional questions regarding this submittal or project, please contact:

Corey Rosson
Sr. Sales Representative
(425) 429-4445

Prepared By:

Heidelberg Materials

Tony Bowman
QC Manager



Concrete Mix Submittal

Submittal Information

Submittal Name Jorgensen Steel Press Pits
Date Submitted 11/09/2023
Customer CONSTRUCTION GROUP
INTERNATIONAL
Project Name Jorgensen Steel Press Pits

Use CDF

Mix Information

Mix ID PFLO5A
Mix Name PRO FLOW 5 HR
Compressive Strength (f'c)

Aggregate Nominal Size #4 (4.75mm)

Air Entrained ☒

Mix Properties

Slump	9-11\10	Sack Content	1.6	94 lb/sack	Total Mass	3212	lb
Air	12	Total Water	53.3	gal	Total Volume	27.00	ft3
W/CM Ratio	2.97	Water/Sack	33.3	gal	Unit Weight	119.0	lb/ft3

Group	Material Description	Specific Gravity	Mass lb	Volume ft3
Cement	Blended Hydraulic Type IL CEMENT TYPE IL(15)	3.1	150	0.775
Aggregate	Fine Aggregate BUILDING SAND - CA7	2.65	2614	15.806
Water	Municipal Water WATER (LBS)	1	445	7.131
Admixture	Air Entrainer AEA (OZ) Range: fl oz/yd3	1	0.652	0.01044
	Other RHEOMAC VMA 358 Range: fl oz/yd3	1	2.281	0.03655
Air	Air			3.240

Contact Tony Bowman

Email Anthony.Bowman@HeidelbergMaterials.com.
com



Mill Test Certificate Report

ASTM Type IL, EcoCemPLC - Portland Limestone Cement
Production Dates: 08/01/2023 to 08/31/2023

Date: 08-Sep-2023
Certificate #: D2L-148

Certification

This will certify that the above described cement meets the standard chemical and physical requirements of ASTM Specification C595 for Type IL Portland-limestone Cement.

General Information

Supplier: Heidelberg Materials Canada Ltd.
Address: 7777 Ross Road.
Delta, British Columbia V4G 1B8
Telephone: 604-946-0411

Source Location: Delta, British Columbia

Tests Data on ASTM C595-19 / AASHTO M240-20 Standard Requirements

Chemical				Physical			
Item	ASTM	Limit	Result	Item	ASTM	Limit	Result
SiO ₂ (%)	C 114	-	19.0	Vicat Initial Set Time (minutes)	C 191	45 to 420	108
Al ₂ O ₃ (%)	C 114	-	4.7				
Fe ₂ O ₃ (%)	C 114	-	3.39	Blaine Fineness (m ² /kg)	C 204	-	429
CaO (%)	C 114	-	64.5	% Retained 45 µm (No. 325) Sieve (%)	C 430	-	0.3
MgO (%)	C 114	-	0.9				
SO ₃ (%)*	C 114	max 3.0	3.07	Air Content (%)	C 185	max 12	9
Na ₂ O (%)	C 114	-	0.27				
K ₂ O (%)	C 114	-	0.39	Autoclave Expansion (%)	C 151	-0.20 to 0.80	0.02
				Mortar Bar Expansion at 14 days (%)	C 1038	max 0.020	0.000
Loss on Ignition (%)	C 114	max 10.0	5.7	Sulphate Resistance (Q1/23)	C 1012	max 0.10	0.09
Free Calcium Oxide (%)	C 114	-	0.4				
				Compressive Strength MPa:			
Adjusted Potential Phase Compounds:**				3 Day	C 109	min 13.0	31.0
C ₃ S (%)	C 150	-	52	7 Day	C 109	min 20.0	36.4
C ₂ S (%)	C 150	-	15	28 Day (previous month)	C 109	min 25.0	43.1
C ₃ A (%)	C 150	-	7				
C ₄ AF (%)	C 150	-	10	Compressive Strength psi:			
Equivalent Alkalies (%)	C 150	-	0.51	3 Day	C 109	min 1890	4502
				7 Day	C 109	min 2900	5275
				28 Day (previous month)	C 109	min 3620	6247
				Color	-	-	61
				Density (Q3/23)	C 188	-	3.08

Notes

* SO₃ may exceed the maximum limit of 3.0% as the cement ASTM C1038 requirements.

** Corrected by using ASTM calculation for Blended Cement

This data given is representative of a monthly average.

September 8, 2023

Date

Quality Manager: Vera Judarta



Certified to
NSF/ANSI CAN 61
& NSF/ANSI 372

Mill Test Certificate Report

ASTM Type IL EcoCEMPLC - Portland-Limestone Cement

Date: 08-Sep-2023

Certificate #: B1L-55

Production Dates: 07/28/2023 to 08/26/2023

Certification

This will certify that the above described cement meets the standard chemical and physical requirements of ASTM Specification C595 for Type IL Portland-limestone Cement.

General Information

Supplier: Heidelberg Materials Canada Ltd.
Address: 7777 Ross Road.
Delta, British Columbia V4G 1B8
Telephone: 604-946-0411

Source Location: Bellingham, WA

Tests Data on ASTM C595-19 / AASHTO M240-20 Standard Requirements

Chemical				Physical			
Item	ASTM / CSA	Limit	Result	Item	ASTM / CSA	Limit	Result
SiO ₂ (%)	C 114	-	19.2	Vicat Initial Set Time (minutes)	C 191	45 to 420	128
Al ₂ O ₃ (%)	C 114	-	4.7				
Fe ₂ O ₃ (%)	C 114	-	3.42	Blaine Fineness (m ² /kg)	C 204	-	427
CaO (%)	C 114	-	64.3	% Retained 45 µm (No. 325) Sieve (%)	C 430	-	0.6
MgO (%)	C 114	-	0.9				
SO ₃ (%)*	C 114	max 3.0	3.04	Air Content (%)	C 185	max 12	10
Na ₂ O (%)	C 114	-	0.26				
K ₂ O (%)	C 114	-	0.38	Autoclave Expansion (%)	C 151	-0.20 to 0.80	0.00
				Mortar Bar Expansion at 14 days	C 1038	max 0.020	0.001
Loss on Ignition (%)	C 114	max 10.0	5.8	Sulphate Resistance % (Q3/22)	C 1012	max 0.10	0.04
Free Calcium Oxide (%)	C 114	-	0.1	Compressive Strength MPa:			
				3 Day	C 109	min 13.0	30.1
Adjusted Potential Phase Compounds:**				7 Day	C 109	min 20.0	35.4
C ₃ S (%)	C 150	-	50	28 Day (previous period)	C 109	min 25.0	41.8
C ₂ S (%)	C 150	-	16				
C ₃ A (%)	C 150	-	7	Compressive Strength psi:			
C ₄ AF (%)	C 150	-	10	3 Day	C 109	min 1890	4360
Equivalent Alkalies (%)	C 150	-	0.52	7 Day	C 109	min 2900	5138
				28 Day (previous period)	C 109	min 3620	6058
				Color (L*)	-	-	61
				Density (g/cm ³ , Q3/23)	C 188	-	3.13

Notes

* SO₃ may exceed the maximum limit of 3.0% as the cement ASTM C1038 requirements.

** Corrected by using ASTM calculation for Blended Cement

This data given is representative of a monthly average.

September 8, 2023

Date

Quality Manager:



Aggregate Source Approval Report

Owner: Construction Aggregates Ltd.

Lessee: Lehigh Materials Ltd.

Located in: Lot 288,Sechelt IR No.2,Group 1,New Westminster District Section - TN RW

Address:

Aggregate Source: PS-CA-7

Known as: Sechelt Pit

County: Canada

Remarks:

Mineral Agg. and Surfacing:	Test Date: 11/20/2020	Expiration Date: 11/20/2025	
Absorption: 0.68	Apparent Sp. G.: 2.747	Bulk Sp. G. (SSD): 2.715	Bulk Sp. G.: 2.697
Deg: 75	LA: 23		

Remarks:

Currently approved as a source of aggregate for:

ATB	Ballast	BST Crushed Cover Stone
BST Crushed Screenings	Crushed Surfacing Base Course	Crushed Surfacing Key Stone
Crushed Surfacing Top Course	Gravel Backfill for Foundation Class A	HMA Other Courses
HMA Wearing Course	Maintenance Rock	Permeable Ballast

Acceptance tests need to be performed as necessary.

Aggregates for Concrete:	Test Date: 12/12/2019	Expiration Date: 12/12/2024	
ASR - 14 Day : 0.16	ASR - One Year:	CCA Absorption:	CCA Sp.G:
Deg:	FCA Absorption: 0.87	FCA Organics: 1	FCA Sp. G.: 2.666
LA:			

Remarks:

Currently approved for:

Fine Concrete Aggregates

Acceptance tests need to be performed as necessary

NOT approved for:

Coarse Concrete Aggregates

Riprap, Quarry Spalls, Rock for Rock Wall, Erosion and Scour Protection:	Test Date:	Expiration Date:	
Absorption:	Apparent Sp. G.:	Bulk Sp. G. (SSD):	Bulk Sp. G.:
Deg:	LA:		

Remarks:

NOT Approved for:

Quarry Spalls	Riprap	Rock for Erosion and Scour Protection
Rock for Rock Walls	Stone 9-27.3(6)	

Streambed Aggregates: Test Date: Expiration Date:

Absorption:	Apparent Sp. G.:	Bulk Sp. G. (SSD):	Bulk Sp. G.:
Deg:	LA:		

Remarks:

NOT Approved for:

Streambed Aggregate	Streambed Aggregate
---------------------	---------------------

Gravel Borrow for Structural Earth Walls: Test Date: Expiration Date:

Bulk Sp. G. (SSD):	Deg:	LA:
--------------------	------	-----

NOT Approved for:

Gravel Borrow for Str Earth Walls

ALL OTHER PIT RUN MATERIALS:

Project Engineer may request preliminary samples but Aggregate Source Approval is not required.

AGGREGATE MATERIALS NOT REQUIRING ASA APPROVAL :

- Aggregate for Gravel Base 9-03.10
- Gravel Backfill for Foundation Class B 9-03.12(1)B
- Gravel Backfill for Walls 9-03.12(2)
- Gravel Backfill for Pipe Zone Bedding 9-03.12(3)
- Gravel Backfill for Drains 9-03.12(4)
- Gravel Backfill for Drywells 9-03.12(5)
- Backfill for Sand Drains 9-03.13
- Sand Drainage Blanket 9-03.13(1)
- Gravel Borrow 9-03.14(1)
- Select Borrow 9-03.14(2)
- Common Borrow 9-03.14(3)
- Native Material for Trench Backfill 9-03.15
- Foundation Material Class A and B 9-03.17
- Foundation Material Class C 9-03.18
- Bank Run Gravel for Trench Backfill 9-03.19
- Commercial Concrete Aggregate 6-02.3(2)B

Appendix D

Photo Log of Current Site Conditions

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 01, Facing Southeast, 7/15/2024



Photo 02, Facing South, 7/15/2024

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 03, Facing Northwest, 7/15/2024



Photo 04, Facing North, 7/15/2024

**Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility**



Photo 05, Facing West, 7/15/2024



Photo 06, Facing East, 7/15/2024

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 07, Facing West, 2,500 Ton Press Pit Pump Room Pit Cover



Photo 08, Facing West, Quench Tank Vault Pit Cover

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 09, Facing West, 660 Ton Press Pump Room Pit Cover

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 10, Facing West, 1,250 Press Pump Room Pit Cover



Photo 11, Facing North, Former Central Accumulation Area DWMU Area, 7/15/2024

Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 12, Facing South, Former Baghouse DWMU Area, 7/15/2024

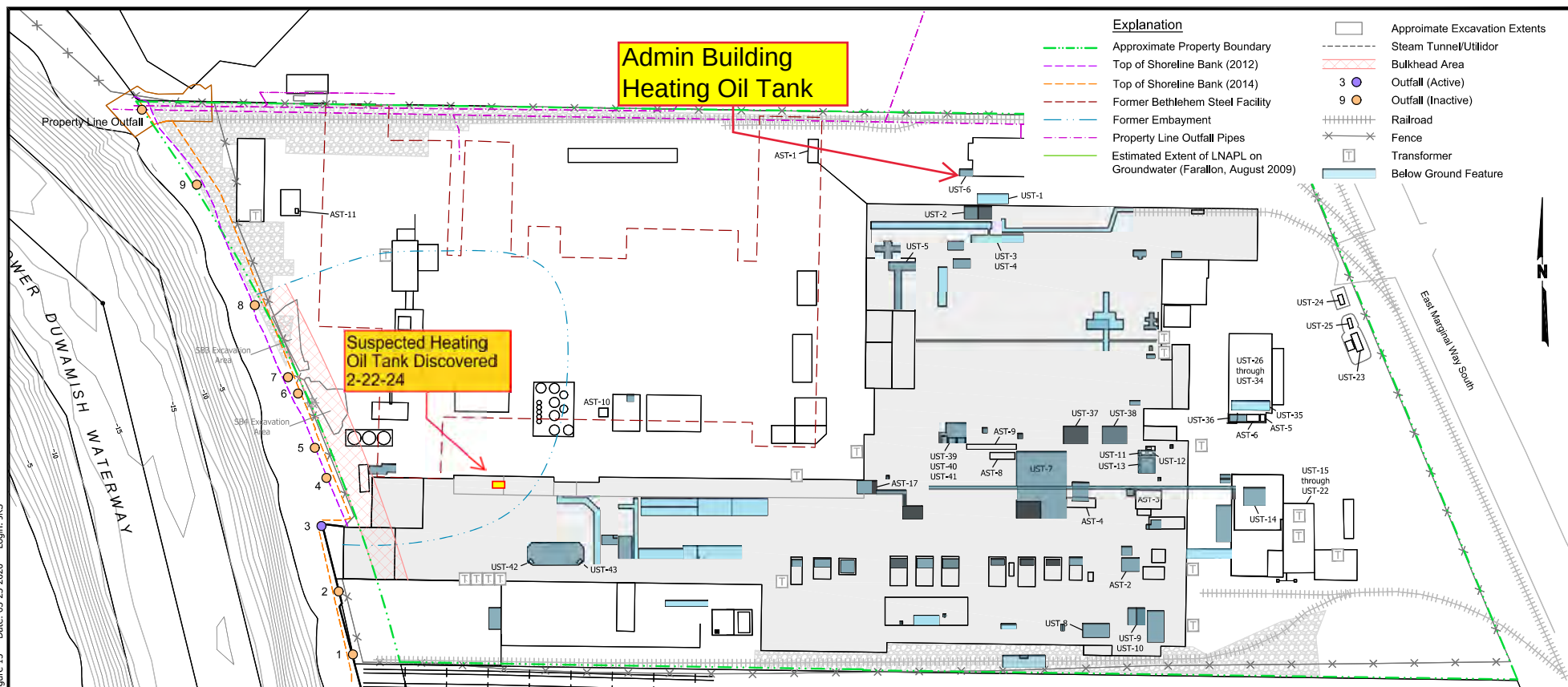
Interim Action Completion Report
Appendix D – Photo Log of Current Site Conditions
Former Jorgensen Forge Facility



Photo 13, Facing West, Former Tote Storage DWMU Area, 7/15/2024

Appendix E

Heating Oil Tank Documentation



Tank ID	Description	Containment	Capacity (Gallons)	Status	Tank ID	Description	Containment	Capacity (Gallons)	Status
UST-1	Hollowbore 59/60 Lathes Cutting Oil Holding Tank	V	11,000	P	UST-36	Waste Oil Tank	V	2,000	R
UST-2	Hollowbore 59/60 Horizontal Lathes Intermediate Cutting Oil Tank	V	240	R	UST-37	West Craven Lathe	V	30	R
UST-3	Hollowbore 58 Horizontal Lathe Clean Cutting Oil Tank	V	5,500	R	UST-38	East Craven Lathe	V	100	R
UST-4	Hollowbore 58 Horizontal Lathe Dirty Cutting Oil Tank	V	5,000	R	UST-39	Quench Tank 1 (Q1)	V	13,000	R
UST-5	Tacchi Cutting Oil Tank	V	2,500	R	UST-40	Quench Tank 2 (Q2)	V	13,000	R
UST-6	Office Building Heating Oil UST	G	600	P	UST-41	Quench Tank 3 (Q3)	V	-	R
UST-7	5,000-Ton Press Hydraulic Oil Tank	V	4,000	R	UST-42	Arc Furnace Hydraulic Oil Tank	V	500	P
UST-8	Ring Expander Hydraulic Oil Tank	V	300	R	UST-43	Arc Furnace Hydraulic Oil Tank	V	500	P
UST-9	Ring Mill Coolant Tank	V	500	R	AST-1	Former Cutting Oil Supply Tank	C	4,000	R
UST-10	Ring Mill Coolant Tank	V	500	R	AST-2	660-Ton Press Hydraulic Oil Tank	C	700	R
UST-11	Quench Tank 5 (Q5)	V	-	R	AST-3	1,250-Ton Press Hydraulic Oil Tank	C	1,000	R
UST-12	Quench Tank 6 (Q6)	V	5,000	R	AST-4	L and F Press Hydraulic Oil Tank	C	700	R
UST-13	Quench Tank 7 (Q7)	V	-	R	AST-5	Used Oil Centrifuge	C	1,200	P
UST-14	Quench Tank 8 (Q8)	V	-	R	AST-6	Clean Hydraulic Oil Tank	C	6,000	P
UST-15 through UST-22	Decommissioned Diesel Storage Area Tanks (8 tanks)	V	96,000	P	AST-7	2,500 Ton Press Hydraulic Oil Tank	C	1,500	R
UST-23	Former Regulated Gasoline UST	G	8,000	R	AST-8	Quench Tank 4 (Q4)	C	-	R
UST-24	Former Unregulated UST	G	2,000	R	AST-9	Quench Tank 9 (Q9)	C	-	R
UST-25	Former Unregulated UST	G	1,000	R	AST-10	Former Gasoline AST	C	300	R
UST-26 through UST-35	Decommissioned Oil Storage Area Tanks (10 tanks)	V	150,000	P	AST-11	Diesel Fuel Tank	C	300	P

NOTES

- Figure adapted from client file, 141500101002_1-8.dwg, prepared by PES Environmental, Inc. dated July 2017, and 01012802-006.dwg, prepared by Anchor Environmental, LLC and Farallon Consulting. Property Boundary from client file, 11078 Topo E-MAIL.dwg, prepared by Anchor QEA, LLC., Dated Jan 24, 2012.



ABBREVIATIONS

AST = Aboveground Storage Tank
 UST = Underground Storage Tank
 V = Within Vault
 C = Within Containment
 G = Directly within Soil
 - = Unknown
 R = Removed
 P = Present

Jorgensen Forge Facility
 8531 East Marginal Way S
 Tukwila, Washington

ASTs AND USTs

April 2020

21-1-12596-013

SHANNON & WILSON, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 15

**Interim Action Completion Report
Appendix E – HOT Documentation
Former Jorgensen Forge Facility**



Photo 01, Facing West, Admin Building Heating Oil Tank Excavation, 1/29/2024

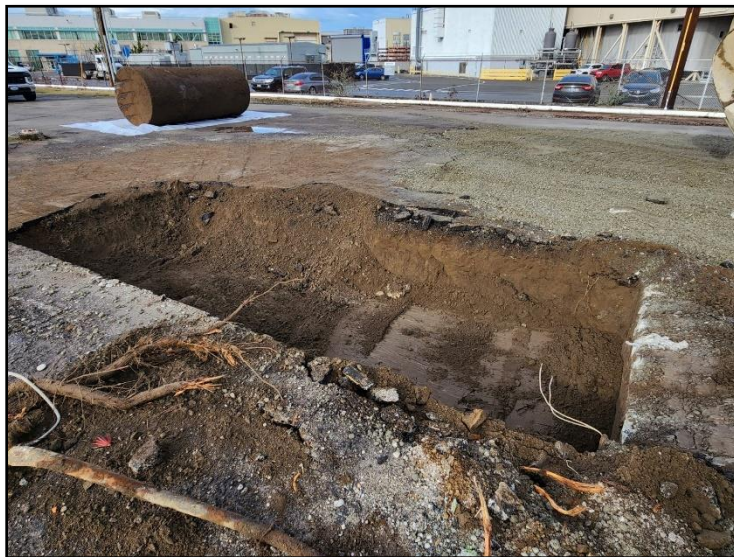


Photo 02, Facing North, Admin Building Heating Oil Tank Excavation, 1/29/2024

**Interim Action Completion Report
Appendix E – HOT Documentation
Former Jorgensen Forge Facility**



Photo 03, Facing Northwest, Admin Building Heating Oil Tank Excavation, 1/29/2024



Photo 04, Facing North, Admin Building Heating Oil Tank Excavation, 1/29/2024



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 26, 2024

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge HOT Characterization
Laboratory Reference No. 2402-292

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on February 23, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 26, 2024
Samples Submitted: February 23, 2024
Laboratory Reference: 2402-292
Project: Star Forge HOT Characterization

Case Narrative

Samples were collected on February 23, 2024 and received by the laboratory on February 23, 2024. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: February 26, 2024
 Samples Submitted: February 23, 2024
 Laboratory Reference: 2402-292
 Project: Star Forge HOT Characterization

HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Product
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Oil Tank-022324					
Laboratory ID:	02-292-01					
Gasoline Range Organics	ND	98000	NWTPH-HCID	2-23-24	2-23-24	U1
Diesel Fuel #2	Detected	240000	NWTPH-HCID	2-23-24	2-23-24	
Lube Oil Range Organics	ND	490000	NWTPH-HCID	2-23-24	2-23-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S



Date of Report: February 26, 2024
 Samples Submitted: February 23, 2024
 Laboratory Reference: 2402-292
 Project: Star Forge HOT Characterization

**HYDROCARBON IDENTIFICATION
 NWTPH-HCID
 QUALITY CONTROL**

Matrix: Product
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223P1					
Gasoline Range Organics	ND	10	NWTPH-HCID	2-23-24	2-23-24	
Diesel Range Organics	ND	25	NWTPH-HCID	2-23-24	2-23-24	
Lube Oil Range Organics	ND	50	NWTPH-HCID	2-23-24	2-23-24	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	77	50-150				



Date of Report: February 26, 2024
 Samples Submitted: February 23, 2024
 Laboratory Reference: 2402-292
 Project: Star Forge HOT Characterization

PCBs EPA 8082A

Matrix: Oil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Oil Tank - 022324					
Laboratory ID:	02-292-01					
Aroclor 1016	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1221	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1232	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1242	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1248	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1254	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1260	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1262	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1268	ND	1.0	EPA 8082A	2-23-24	2-23-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>100</i>	<i>59-125</i>				



Date of Report: February 26, 2024
 Samples Submitted: February 23, 2024
 Laboratory Reference: 2402-292
 Project: Star Forge HOT Characterization

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Oil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223P1					
Aroclor 1016	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1221	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1232	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1242	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1248	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1254	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1260	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1262	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Aroclor 1268	ND	1.0	EPA 8082A	2-23-24	2-23-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	59-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0223P1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	9.48	9.36	9.84	9.88	N/A	96	95	48-121	2	31
Surrogate:										
DCB						93	92	59-125		





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Chain of Custody

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com									
Company: DH Environmental									
Project Name: Star Forge HCT characterization									
Project Manager: D Hill									
Sampled by: N. Moxley									
Turnaround Request (in working days) (Check One) ☐ Same Day ☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☐ (other) _____									
Laboratory Number: 02-292									
Number of Containers									
NWTPH-HCID									
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)									
NWTPH-Gx									
NWTPH-Dx (SG Clean-up ☐)									
Volatiles 8260									
Halogenated Volatiles 8260									
EDB EPA 8011 (Waters Only)									
Semivolatiles 8270/SIM (with low-level PAHs)									
PAHs 8270/SIM (low-level)									
PCBs 8082									
Organochlorine Pesticides 8081									
Organophosphorus Pesticides 8270/SIM									
Chlorinated Acid Herbicides 8151									
Total RCRA Metals									
Total MTCA Metals									
TCLP Metals									
HEM (oil and grease) 1664									
% Moisture									

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator ID Number

WAD000002813

2. Page 1 of

1

3. Emergency Response Phone

800-337-7455

4. Waste Tracking Number

STR-HOT-022824

5. Generator's Name and Mailing Address

Star Forge LLC DBA Jorgensen Forge
8531 E Marginal Way S
Seattle WA 98108

Alt: Wayne R Turk

Generator's Site Address (if different than mailing address)

Generator's Phone: 206 255-8177

6. Transporter 1 Company Name

DH Environmental Inc.

U.S. EPA ID Number

WAH000047217

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Marine Vacuum Services Inc
1516 S Graham Street
Seattle WA 98108

U.S. EPA ID Number

Facility's Phone:

WAD900074521

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total
Quantity

12. Unit
Wt./Vol.

1. NA1993, Combustible liquid, n.o.s. (Diesel)

X PGIII

01 DOT 1600 G

2.

3.

4.

13. Special Handling Instructions and Additional Information

1) Profile# ERG#128

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name

WAYNE R. TURK

Signature

Wayne R Turk

Month Day Year

02 28 24

15. International Shipments

☐

Import to U.S.

☐

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Al Lortang

Signature

Al Lortang

Month Day Year

02 28 24

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

☐

Quantity

☐

Type

☐

Residue

☐

Partial Rejection

☐

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Wayne R Turk

Signature

Wayne R Turk

Month Day Year

02 28 24

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD000002813	2. Page 1 of 1	3. Emergency Response Phone 800-337-7455	4. Waste Tracking Number STR-HOT-022824
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108 Generator's Phone: 206 255-8177					
6. Transporter 1 Company Name DH Environmental Inc.					
7. Transporter 2 Company Name					
8. Designated Facility Name and Site Address Marine Vacuum Services Inc 1516 S Graham Street Seattle WA 98108					
U.S. EPA ID Number WAH000047217					
U.S. EPA ID Number					

BILL OF LADING
PRODUCT TRANSPORT MANIFEST
MARINE VACUUM SERVICE, INC.
 24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240
 FAX NUMBER 206-763-8084
 TRUCK NUMBER _____ DATE 8-28-24

Nº 33397

TO
 DESTINATION
 NAME Marine Vacuum Service, Inc.
 STREET 1516 South Graham Street
 CITY/STATE Seattle, WA 98108

FROM
 SHIPPER DH Environmental
 NAME 8531 E Marginal Wy
 STREET Seattle, WA
 CITY/STATE

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
<u>1600 gal</u>	<u>Use Diesel & Water</u>	
	<u>70% wash Cut 30%</u>	
	<u>SLUDGE</u>	
RECEIVER <u>RVS Roy</u>	DATE <u>2/28/24</u>	SHIPPER <u>X</u> DATE _____

NOTE:

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectable levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recover Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection			
17b. Alternate Facility (or Generator)		Manifest Reference Number:	
Facility's Phone:		U.S. EPA ID Number	
17c. Signature of Alternate Facility (or Generator)		Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a			
Printed/typed Name		Signature	
Month Day Year		Month Day Year	

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

Appendix F

Transformer Spill Performance Based Disposal Report

May 30, 2024

Mr. Brett Feldhahn
PCB Coordinator
US EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101
206-553-2899

Via email to:

feldhahn.brett@epa.gov

bejo461@ecy.wa.gov

**Re: Former Jorgensen Forge Property, Tukwila, Washington
Transformer Spill, Performance-Based Disposal Documentation**

Dear Mr. Feldhahn,

This letter has been prepared on behalf of Star Forge, LLC, to document the cleanup of a transformer spill at the former Jorgensen Forge property (Property), located at 8531 E. Marginal Way, in Tukwila, Washington. A vicinity map is included in Figure 1.

The spill and subsequent cleanup of polychlorinated biphenyls (PCBs) described in this report, including the initial spill response, agency notifications, final cleanup and confirmation sampling, and disposal of PCB remediation waste under 40 CFR § 761.61(b), was conducted prior to the recent rule changes affecting 40 CFR § 761.61(b), which went into effect on February 26, 2024.

Initial Spill Discovery

On September 16, 2020, personnel from DH Environmental discovered evidence of vandalism and theft from the Property, including damage to two large transformers in the former Powerhouse structure (apparently resulting from an attempt by thieves to scavenge metal). The damage to one of the transformers, designated TC-24, resulted in a small spill of transformer oil. Transformer TC-24 was located on the east half of the second floor of the former Powerhouse structure. The location of the former Powerhouse structure is shown in Figure 2. Additional location information is included in Attachment 1.

It was estimated that approximately 3- to 5-gallons of transformer oil were spilled from transformer TC-24. PCBs were reported in a sample of the transformer oil at a concentration of 1,400 milligrams per kilogram (mg/kg). Assuming the maximum volume of 5-gallons was released, the total mass of PCBs from the spill was 0.05 pounds.

The spill occurred indoors inside the TC-24 transformer room. Some of the transformer oil dripped down through a hatch on the second floor and onto the first floor slab directly beneath the TC-24 transformer room. No storm drains, sanitary sewers, or soil were impacted by the release. The spill only impacted the east half of the central powerhouse structure, on the first and second floors.

The second transformer, designated as TC-23, was located on the west half of the second floor of the former Powerhouse structure. Transformer TC-23 appeared to be empty and no evidence of a release was visible. Residual oil from transformer TC-23 was later sampled and PCBs were reported at a concentration of 14.3 mg/kg.

A field report documenting the original spill discovery is included in Attachment 1.

Initial Spill Response

DH Environmental personnel responded to the spill the day after discovery, on September 17, 2020. All recoverable transformer oil was removed using spill absorbent. All spent absorbent and cleanup debris were containerized in Department of Transportation (DOT) approved 55-gallon drums for offsite disposal. Plastic sheeting was laid over all surfaces that had been impacted by the transformer oil, and M_L PCB marking stickers were placed on the plastic and on all doorways leading into the rooms affected by the transformer spill. Spill absorbent was placed inside transformer TC-24 to absorb any remaining residual oil, and the drain valve was covered with an oil absorbent pad and secured in place with tape.

Post cleanup samples were collected from the concrete slabs that transformer oil had been spilled on. Concrete samples were collected from both the first and second floors by drilling into the concrete floor and collecting the cuttings into a laboratory supplied sampling jar. A wipe sample was also collected from the concrete surface on the second floor, closest to the transformer that had spilled. PCBs were reported in the concrete samples at a concentration of 200 mg/kg and 30 mg/kg, from the first and second floors, respectively. PCBs were reported in the wipe sample from the second floor at a concentration of 24,000 micrograms per 100 square centimeters (µg/100 cm²). A copy of the initial laboratory analytical reports is included in Attachment 1.

Agency Notifications

The spill was reported to the Washington State Department of Ecology (Ecology) Environmental Report Tracking System (ERTS) on September 17, 2020 (ERTS # 700704). A follow-up letter was also provided to Ms. Katy Harvey in Ecology's Hazardous Waste & Toxics Reduction Program on September 25th, 2020.

In addition, a letter was sent to Ms. Michelle Pirzadeh, the EPA Region 10 Administrator, on March 17, 2022, requesting clarification on the storage limitations outlined in 40 CFR § 761.65(a)(1). At that time, final cleanup of the transformer spill was not possible due to long-delayed negotiations with Ecology surrounding an interim action workplan for the facility. Those delays in turn held up issuance of a demolition permit by the City of Tukwila, which was necessary to remove the transformers and conduct the final cleanup. To date, no response to the March 2022 letter has been received from EPA.

A copy of the March 2022 letter to Ms. Pirzadeh is included as Attachment 1. Attachment 1 also includes a copy of the ERTS notification confirmation email and field report, a copy of the letter provided to Ms. Harvey, and copies of the disposal records for the initial cleanup waste.

Final Cleanup Activities

Due to the physical location of the transformers and the condition of the building in which they were located, the final cleanup actions required demolition of the building. The transformer carcasses were too big to be removed using the former staircase, and the crane rails used to install the transformers were not structurally sound. Due to PCB contamination of the concrete slabs on the first and second floors, the concrete slabs themselves also required removal. Because the concrete slabs were structural members of the building, they had to be removed concurrent with building demolition.

Once Ecology and Star Forge, LLC entered into an Agreed Order for implementation of an interim action work plan unrelated to the transformer spill (including removal of existing underground storage tanks and completion of “clean closure” under Ecology’s dangerous waste regulations), the City of Tukwila issued a demolition permit for the removal of all buildings on the property. Demolition permit D19-0311 was issued on August 8, 2023. Due to structural considerations and construction sequencing, demolition of the former Powerhouse structure did not begin until the week of December 11, 2023.

To remove the empty transformer carcasses, the south wall of the Powerhouse structure was removed from the second floor using heavy equipment. Care was taken to pull the wall outwards, away from the exterior of the building, to minimize demolition debris from contacting the PCB impacted concrete. The PCB impacted concrete slabs had been covered with plastic sheeting as an added measure of protection. Once the south wall was removed, the transformer carcasses were pulled through the wall and lowered to the ground using a crane. The transformer carcasses were then wrapped with plastic and placed on plastic sheeting pending off-site disposal.

Once the transformer carcasses had been removed, the roof and the walls above the second floor of the building were removed. Care was taken to remove sections of the building in a manner to minimize them from falling inwards and onto the PCB impacted concrete floor.

Once the walls and roof had been removed above the second floor, the concrete slab in the eastern half of the second floor (the TC-24 transformer room) was removed and allowed to fall onto the first floor directly beneath it. The PCB impacted concrete was then carefully removed using an excavator and placed on plastic sheeting pending off-site disposal. The eastern half of the first floor was then covered with a new layer of plastic sheeting before continuing with removal of the remaining structure. The remaining structure was then removed, again being careful to direct debris outwards and away from the first floor slab.

Any debris that came into contact with the PCB impacted concrete slabs was assumed to also be PCB impacted, and was segregated and managed as PCB remediation waste. Debris from the walls, roof, and western portions of the building was managed as standard construction debris. Once the general construction debris was cleared from the surrounding area, the PCB impacted slab on the east half of the first floor was removed and placed on plastic sheeting. The stockpile of PCB impacted concrete was then covered with plastic sheeting until off-site transportation could be arranged.

Confirmation Soil Sampling

Once the first floor PCB impacted concrete slab from the eastern half of the former Powerhouse structure had been removed, confirmation soil samples were collected beneath the former slab. The final extent of slab removal was approximately 11-feet wide (east-west) by 22-feet long (north-south) by 1.5-feet deep. Soil samples were collected by dividing the excavation area into quadrants and collecting a soil sample from the center of each quadrant. The samples were collected by scooping the soil from the base of the excavation directly into a laboratory supplied sampling jar. Dedicated nitrile gloves were worn for the collection of each sample. The samples were labeled with the prefix “powerhouse-SS” to indicate a soil sample from beneath the powerhouse, followed by a directional indicator to indicate which quadrant the sample was collected from (northeast [NE], northwest [NW], southeast [SE], or southwest [SW]), followed by the depth in feet below grade. For example, the soil sample from the southwest quadrant of the excavation was labeled as ‘powerhouse-SS-SW-1.5’. One duplicate soil sample ‘Powerhouse-dup-1’ was also collected from the same location as sample ‘Powerhouse-SS-SE-1.5’.

Following sample collection, the soil samples were placed in an iced cooler for delivery to the lab following chain of custody protocols. The samples were delivered to Onsite Environmental, Inc., in Redmond, Washington for analysis of PCBs by EPA Method 8082A.

PCBs were not reported in any of the soil samples at a concentration greater than or equal to the laboratory practical quantitation limit (PQL). The post-excavation PCB analytical results are summarized in Table 1. The laboratory analytical report is included in Attachment 2.

Waste Disposal

All cleanup debris was disposed of as Toxic Substances Control Act (TSCA) regulated PCB remediation waste to Chemical Waste Management, a permitted TSCA/Subtitle C Landfill in Arlington, Oregon.

The original spill response cleanup waste consisted of two, 55-gallon drums with a total weight of 220-pounds. The drums were disposed of on September 25, 2020, under profile number OR345688. The cleanup waste was shipped for disposal on hazardous waste manifest number 021751122JJK.

A total of 101.49-tons of PCB impacted concrete and debris were direct-hauled via dump truck on December 27, 2023 under profile OR357799. The concrete and debris was shipped on hazardous waste manifests 018614506FLE through 018614509FLE (4 loads).

Transformer TC-24, from the original spill, was loaded onto a container for shipment under profile OR357800 (PCBs greater than 500 parts per million [ppm]). The 2,240-pound transformer carcass was shipped on manifest 025895525JJK on January 24, 2024.

Transformer TC-23, which never leaked, was loaded into a separate container for shipment under profile OR358045 (PCBs less than 500 ppm). Transformer TC-23 was packaged for shipment with a third transformer from elsewhere on the property. The third transformer was designated as TC-26,

and was originally located on the roof, approximately 200-feet east of the former powerhouse. Historical records indicate transformer TC-26 was non-detect for PCBs in 1997. Residual oil from transformer TC-26 was sampled in January 2024 and PCBs were reported at a concentration of 0.79 mg/kg. The TC-23 and TC-26 transformer carcasses were both filled with oil absorbent as a precautionary measure prior to shipment, and both were shipped out on manifest 025895526JJK on January 24, 2024. The combined shipping weight of both transformer carcasses was 16,560-pounds.

A copy of the disposal records is included in Attachment 3.

Equipment Decontamination

All equipment potentially in contact with PCB remediation waste was kept segregated from other areas of the site. When not in active use, the excavator buckets and breaker bar were temporarily wrapped with plastic sheeting. Before being used on other areas of the site, the equipment was decontaminated following the procedures in 40 CFR § 761 subpart S, by manually wiping all surfaces with diesel-soaked rags. Following the solvent wipe procedure, the equipment was wiped again with rags and an Alconox detergent solution, followed by a final wipe with rags and distilled water. The decontamination was verified by collecting standard wipe tests, as defined in 40 CFR § 761.123, from each piece of equipment. Decontamination was conducted on two separate dates, December 20 and 27, 2023. The results of each wipe sample confirmed PCBs were less than the decontamination standards in 40 CFR § 761.79(b)(3)(i) of 10 micrograms per 100 square centimeters ($\mu\text{g}/100\text{ cm}^2$). A copy of the wipe testing analytical reports are included in Attachment 4.

All rags, plastic sheeting, personal protective equipment (PPE), and other miscellaneous decontamination supplies were bagged and disposed of with the transformers.

Sincerely,



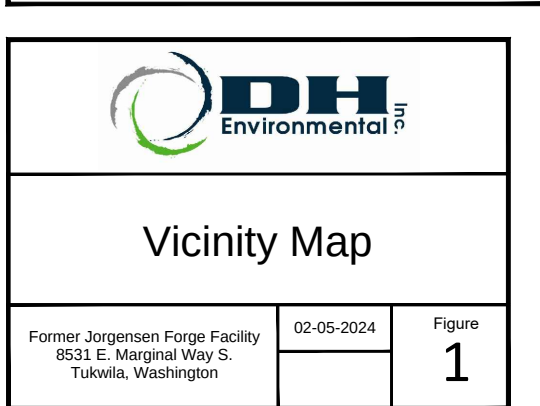
Nathan Moxley, LHG
Principal Geologist
DH Environmental, Inc.
nathan.moxley@dhenviro.com

Cc: Mr. Beau Johnson, LG, Cleanup Site Manager, Toxics Cleanup Program, NWRO, Washington State Dept. of Ecology.

Enclosures

Figure 1	Vicinity Map
Figure 2	Former Powerhouse Structure Location Map

Table 1	Post-Excavation Confirmation Soil Sample Analytical Results Summary
Attachment 1	Letter to Ms. Michelle Pirzadeh, Regional Administrator, US EPA Region 10, March 17, 2022
Attachment 2	Post-excavation Soil Sample Laboratory Analytical Report (2312-241)
Attachment 3	PCB Disposal Documents
Attachment 4	PCB Wipe Sample Laboratory Analytical Results (2312-252 and 2312-300)



— Former Jorgensen Forge Property



Background Images Source: Google Earth Pro 5/26/2018



Former Powerhouse Structure
Location Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA, 98108

01/12/2024

Figure

2

Legend

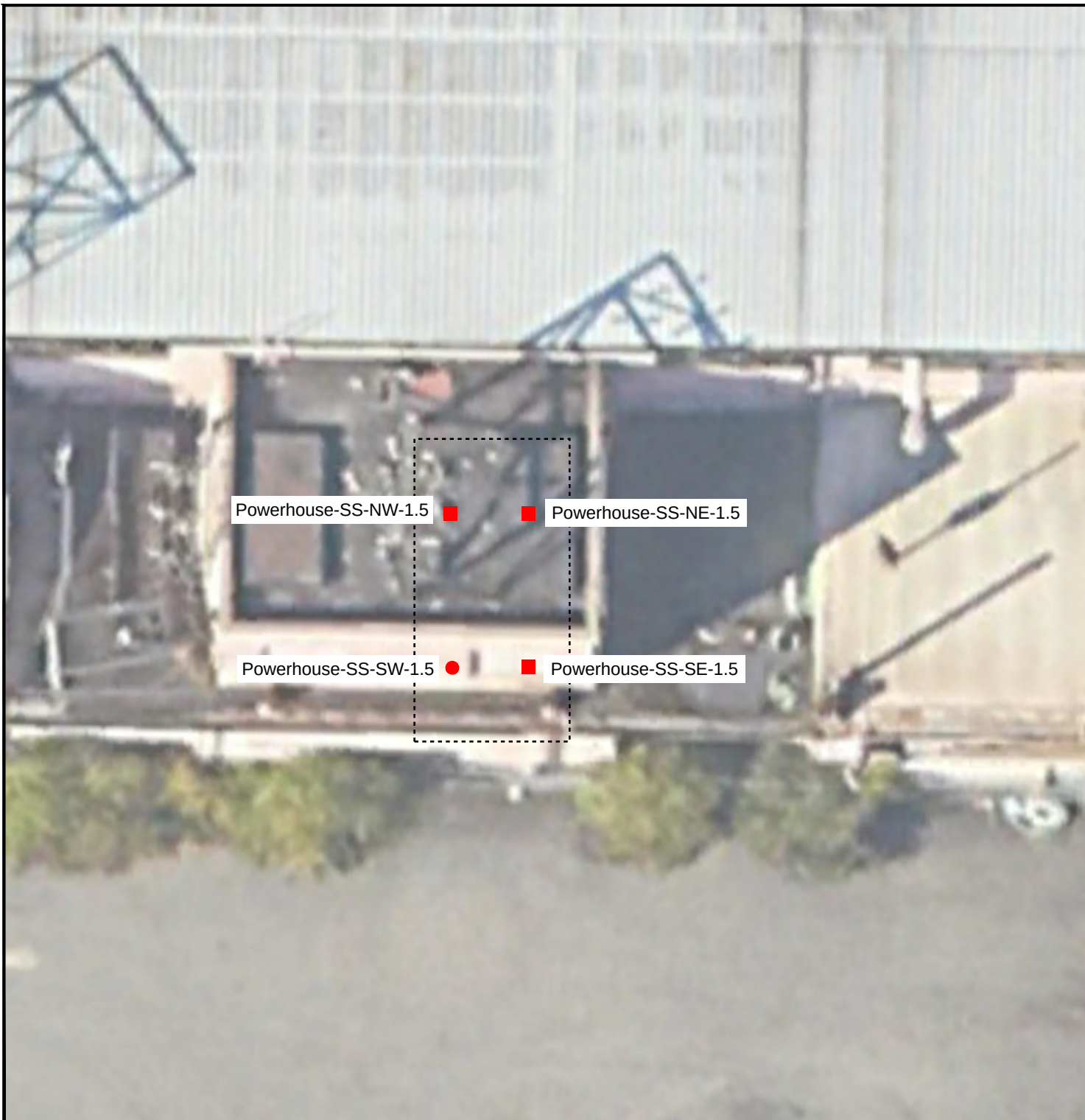
 Former Powerhouse Structure

Note:

1. Aerial Photography Source:
Google Earth Pro, 08/14/2020.



0 60 120
Scale in Feet



Confirmation Soil Sample Locations

Former Jorgensen Forge Facility
8531 East Marginal Way S
Tukwila, WA, 98108

01-26-2024

Figure

3

LEGEND



Confirmation Soil Sample
Location and Designation



Approximate Excavation Extent



0 5 10
Scale in Feet

Table 1
PCB Analytical Results Summary
Confirmation Soil Samples, Powerhouse Slab Removal
December 19, 2023
Former Jorgensen Forge Site, Tukwila, Washington

Sample ID	PCBs (mg/kg)								
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Total PCBs
Powerhouse-SS-NW-1.5	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U
Powerhouse-SS-NE-1.5	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U
Powerhouse-SS-SW-1.5	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U	0.055 U
Powerhouse-SS-SE-1.5	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
Powerhouse-Dup-1	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U

Notes

1. "U" denotes analyte not detected at a concentration greater than or equal to the given laboratory practical quantitation limit (PQL).

Abbreviations

PCB = polychlorinated biphenyl

mg/kg = milligrams per kilogram

Analytical Methods

PCBs by EPA Method 8082A

Analyzed by Onsite Environmental, of Redmond, Washington (Lab report 2312-241)

March 17, 2022

Ms. Michelle Pirzadeh
Regional Administrator
US EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101
206-553-1272

Via email to:

pirzadeh.michelle@epa.gov

mullin.michelle@epa.gov

**Re: Former Jorgensen Forge Property, Tukwila, Washington
Extension Request for PCB Storage Limitation Under 40 CFR § 761.65**

Dear Ms. Pirzadeh,

Based on a recent meeting with Ms. Michelle Mullin, we agreed to send this request for an extension to the polychlorinated biphenyls (PCB) storage limitations outlined in 40 CFR § 761.65(a)(1), for the disposal of PCB waste at the former Jorgensen Forge property, located at 8531 E. Marginal Way S., in Tukwila, Washington (Property).

As described below, there is also some question as to whether the storage limitations apply in this case. Therefore, we also request clarification on the issue for our future reference.

Background

On September 16, 2020, personnel from DH Environmental discovered evidence of vandalism and theft from the Property, including damage to two large transformers (apparently resulting from an attempt by thieves to scavenge metal) that resulted in the spill of transformer oil from one of the transformers. The spill was reported to the Washington State Department of Ecology (Ecology) Environmental Report Tracking System (ERTS) on September 17, 2020 (ERTS # 700704). A follow-up letter was also provided to Ms. Katy Harvey in Ecology's Hazardous Waste & Toxics Reduction Program on September 25th, 2020. A copy of the ERTS notification confirmation email and attached field report, including initial lab data from the transformer oil, are included in Attachments 1 and 2, respectively. A copy of the letter provided to Ms. Harvey is included as Attachment 3.

It was estimated that approximately 3- to 5-gallons of transformer oil were spilled. PCBs were reported in a sample of the transformer oil at a concentration of 1,400 milligrams per kilogram (mg/kg). Assuming the maximum volume of 5-gallons was released, the total quantity of PCBs from the spill was 0.05 pounds. A copy of the spill volume calculations were provided in the field report attached to the ERTS notification included in Attachment 2.

The spill occurred indoors on the second floor of the building, and some of the transformer oil dripped down to the first floor. No storm drains, sanitary sewers, or soil were impacted by the release. DH Environmental personnel responded to the spill the next day on September 17, 2020.

All recoverable transformer oil was removed using spill absorbent. All spent absorbent and cleanup debris were containerized in Department of Transportation (DOT) approved 55-gallon drums for offsite disposal. Plastic sheeting was laid over all surfaces that had been impacted by the transformer oil, and M_L PCB marking stickers were placed on the plastic and on all doorways leading into the rooms affected by the transformer spill. All cleanup debris was disposed of as Toxic Substances Control Act (TSCA) regulated PCB waste to Chemical Waste Management, a permitted Subtitle C Landfill in Arlington, Oregon. The cleanup waste was disposed of on September 25, 2020, under profile number OR345688. The cleanup waste was shipped for disposal on hazardous waste manifest number 021751122JJK.

Post cleanup samples were collected from the concrete slabs that transformer oil had been spilled on. Concrete samples were collected from both the first and second floors by drilling into the concrete floor and collecting the cuttings into a laboratory supplied sampling jar. A wipe sample was also collected from the concrete surface on the second floor, closest to the transformer that had spilled. PCBs were reported in the concrete samples at a concentration of 200 milligrams per kilogram (mg/kg) and 30 mg/kg, from the first and second floors, respectively. PCBs were reported in the wipe sample from the second floor at a concentration of 24,000 micrograms per 100 square centimeters (µg/100 cm²).

Planned Cleanup Activities

Due to the physical location of the transformers and the current condition of the building in which they are located, the final cleanup of the transformer spill will require portions of the building to be removed. The transformer carcasses are too big to be removed using the existing staircase, and the crane rails believed to have been used to install the transformers are not structurally sound. In addition, the concrete slabs themselves also require removal. Because the concrete slab on the second floor is a structural member of the building, it cannot be removed without demolition of the structure itself.

The owner of the Property, Star Forge, LLC, plans to demolish all of the buildings on the Property and has applied to the City of Tukwila (City) for a demolition permit. We have recommended the PCB cleanup of these transformers and concrete slabs be conducted as part of those demolition activities. The City has indicated that Star Forge cannot proceed with any demolition on the Property – even for removal of the transformers – until they have approved and issued the demolition permit. The demolition work plan submitted to the City as part of the demolition permit application includes a section describing the removal of the transformers and a performance-based cleanup to be performed under 40 CFR 761.61(b). Essentially, the transformers will be removed through the roof using a crane, and the concrete slabs will be segregated during demolition and disposed of as TSCA waste to a subtitle C landfill. No attempt will be made to scarify or otherwise remove the PCBs from the concrete. We estimate approximately 20 cubic yards of concrete will require removal and disposal as PCB waste, plus the two transformer carcasses. The location of these transformers is shown on PDF pages 3 and 4 of the September 25, 2020 letter to Ms. Harvey, included in Attachment 3.

Final Cleanup Schedule

We do not yet know when the demolition permit will be approved, but all indications are that it will be approved this year. The City has indicated their review and approval of the demolition permit is contingent upon final Ecology approval of the Interim Action Work Plan (IAWP) for the Property, because certain activities described in the IAWP require demolition of overlying superstructures.

Ecology has recently approved the public review draft of the IAWP for the property, and the IAWP is currently out for public comment as of March 14, 2022. A copy of the public review draft of the IAWP was provided to Ms. Michelle Mullin, EPA Region 10 PCB Coordinator, via email on March 14, 2022. We expect the City of Tukwila to take action on the demolition permit application after the IAWP is finalized.

Regulatory Interpretation

In accordance with 40 CFR 761.60(b)(6)(ii)(B), the transformer carcasses are not regulated under subpart D of this chapter, because they have both been drained of free-flowing liquids. This includes the storage time limitations in Subpart D (40 CFR 761.65), which is supported by the 2014 PCB Q&A Manual (EPA, 2014), which states:

Q: If I store a drained PCB-Contaminated transformer for disposal for more than nine months, must I file an exception report?

A: Storage for disposal of drained PCB-contaminated articles, including transformers, is not regulated (see §761.60(b)(6)(ii)(B)). Therefore, neither the one-year disposal requirement nor the one-year exception reporting requirement apply to the waste.

The concrete which has been contaminated by oil spilled from the transformer is a spill of 10-pounds or less (estimated mass of 0.05-pounds), and notification to EPA is not required for a spill of this size per the requirements of 40 CFR § 761.125(a)(1)(iv). In addition, the spill is still considered an active cleanup due to the current lack of access to the site. As noted in 40 CFR § 761.125(b)(2),

Completion of cleanup may be delayed beyond 48 hours in case of circumstances including but not limited to, civil emergency, adverse weather conditions, lack of access to the site, and emergency operating conditions.

Request for Clarification and Extension of PCB Storage Limitations

When the vandalism to the transformers and the resulting spill were discovered, we believed the demolition permit from the City of Tukwila would be issued shortly. As indicated above, however, the City has delayed processing of the demolition permit application while the owner of the Property has negotiated an Agreed Order and IAWP with Ecology. The IAWP addresses removal of 18 underground storage tanks and the permanent closure of dangerous waste management units on the Property, which is already the subject of a remedial investigation being conducted by the prior owner under a separate Agreed Order with Ecology. In the interim, we have been very involved with preparing the required work plans and related tasks necessary to support the demolition permit and approval of the IAWP. Because the demolition permit application is still

pending review by the City of Tukwila, and we cannot perform the demolition work required for removal of the transformers and contaminated concrete until that application is approved, we respectfully request an extension to the PCB storage limitations outlined in 40 CFR § 761.65(a)(1), if your office interprets those storage limitations to apply in this case.

As communicated with Ms. Mullin in our call on March 14, 2022, we will keep her office informed as work progresses on this Property related to any tasks involving PCBs, including activities that may not be considered "TSCA regulated". We appreciate the open line of communication and collaboration as we work towards demolition of these buildings and the final cleanup of the PCB spill.

Please let us know if you need any more information as you consider this request. We are happy to show you or your staff the affected areas of the property if that will be helpful in your decision making, as some of these details are hard to convey on figures and photographs alone.

Sincerely,

A handwritten signature in blue ink, appearing to read "Nathan Moxley".

Nathan Moxley, LHG
Principal Geologist
DH Environmental, Inc.
nathan.moxley@dhenviro.com

Cc: Ms. Michelle Mullin, USEPA Region 10 PCB Coordinator

Enclosures

- Attachment 1 ERTS Notification Email Confirmation, 9/17/2020
- Attachment 2 Transformer Spill Discovery Field Report and Initial Sample Data (email attachment with ERTS report)
- Attachment 3 Letter to Ms. Katy Harvey, Ecology Dangerous Waste Program, 9/25/2020

References:

EPA, 2014. June 2014 Version, Revisions to the PCB Q and A Manual. June.

Nathan Moxley

From: David Hill
Sent: Thursday, September 17, 2020 1:37 PM
To: ECY RE NWRO ERTS
Cc: Harvey, Katy (ECY); Sanchez, Maureen (ECY); Billick, Ben (ECY); Lynn Miranda; Richard H. Allan; Bradley M. Marten; James Robertson; Stephen Busby; Adler, David (ECY); Musa, Donna K. (ECY)
Subject: RE: Transformer Oil Spill at 8531 E Marginal Way S, Tukwila, WA 98108 (Former Jorgensen Forge Facility)

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Thank you Katelyn. If there is any way to do so, can you please have the spill group contact me if they intent to make a site visit? I understand our folks are wrapping up on-site now and I want to be sure they have someone to escort them.

Thanks,

David J. Hill, PE, CHMM, CPEA
President / Principal Engineer
DH Environmental, Inc.
Phone: 206.293.3126
email: davehill@dhenviro.com
www.dhenviro.com

From: ECY RE NWRO ERTS <nwroerts@ECY.WA.GOV>
Sent: Thursday, September 17, 2020 1:11 PM
To: David Hill <davehill@dhenviro.com>
Cc: Harvey, Katy (ECY) <KGIB461@ECY.WA.GOV>; Sanchez, Maureen (ECY) <MASA461@ECY.WA.GOV>; Billick, Ben (ECY) <BBIL461@ECY.WA.GOV>; Lynn Miranda <Lynn.Miranda@TukwilaWA.gov>; Richard H. Allan <rallan@martenlaw.com>; Bradley M. Marten <bmarten@martenlaw.com>; James Robertson <jrobertson@JorgensenForge.com>; Stephen Busby <sbusby@ce-starllc.com>; Adler, David (ECY) <DADL461@ECY.WA.GOV>; Musa, Donna K. (ECY) <DMUS461@ECY.WA.GOV>
Subject: RE: Transformer Oil Spill at 8531 E Marginal Way S, Tukwila, WA 98108 (Former Jorgensen Forge Facility)

Thank you David,

This report has been documented in Ecology's Environmental Report Tracking System (ERTS) as report # 700704.

Katelynn Piazza (she/her)
ERTS & SEPA Coordinator
Washington State Department of Ecology
Northwest Regional Office
3190 160th Ave SE | Bellevue, WA 98008-5452
(425) 649-7229 | katelynn.piazza@ecy.wa.gov



NOTICE: This communication is a public record and may be subject to disclosure pursuant to the Public Records Act (RCW 42.56).

From: David Hill <davehill@dhenviro.com>

Sent: Thursday, September 17, 2020 1:02 PM

To: ECY RE NWRO ERTS <nwroerts@ECY.WA.GOV>

Cc: Harvey, Katy (ECY) <KGIB461@ECY.WA.GOV>; Sanchez, Maureen (ECY) <MASA461@ECY.WA.GOV>; Billick, Ben (ECY) <BBIL461@ECY.WA.GOV>; Lynn Miranda <Lynn.Miranda@TukwilaWA.gov>; Richard H. Allan <rallan@martenlaw.com>; Bradley M. Marten <bmarten@martenlaw.com>; James Robertson <jrobertson@JorgensenForge.com>; Stephen Busby <sbusby@ce-starllc.com>

Subject: Transformer Oil Spill at 8531 E Marginal Way S, Tukwila, WA 98108 (Former Jorgensen Forge Facility)

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Good afternoon,

Please see the attached report regarding a transformer oil spill at 8531 E Marginal Way S, Tukwila, WA 98108. The spill was a result of vandalism/attempted theft at the site and it is unknown exactly when the spill occurred. An estimated 3-5 gallons was spilled from the transformer and all oil was contained on-site and indoors. No storm drains, sanitary sewers, or soil have been impacted. DH Environmental, Inc. is currently onsite conducting cleanup.

This incident is related to ongoing break-ins and trespass at the site. We will follow up with applicable police reports. I may be reached at the email and phone number below.

Thank you,

David J. Hill, PE, CHMM, CPEA
President / Principal Engineer
DH Environmental, Inc.
Phone: 206.293.3126
email: davehill@dhenviro.com
www.dhenviro.com



1011 SW KICKITAT WAY
SUITE 107
SEATTLE, WASHINGTON 98134

FIELD REPORT

File Name:
FR_SF break-in
discovery_09162020

Project:
Star Forge

Date:
9/16/2020

Owner:
Star Forge

Time of Arrival:
0900

Report Number:
1

Prepared by:
Nathan Moxley

Location:
8531 East Marginal Way

Time of Departure:
1230

Page:
Page 1 of 1

Purpose of Site Visit:
Slag pH Sampling

Weather:
Indoors

Travel/Prep. Time:
3 hr

Project/Contract Number:
Work Order 03 – Clean Closure

Upon arrival to the site I assessed personal safety hazards: ☒ Yes or ☒ Referred to Site Safety Plan and Safety Tailgate if applicable
Safety Hazards Were Addressed by: ☒ Performing tool box safety meeting ☒ Donning PPE, and observing safety standards

Site Visit Purpose and Details:

A site visit was conducted to collect samples of metal slag-like material from subsurface process pits. Upon arrival to the Facility, evidence of a break-in was observed in the former Melt Shop Area and other areas throughout the property.

Summary of Field Activities:

Nathan Moxley and Brian Johnson of DH Environmental arrived onsite at approximately 0900. Upon arrival we unloaded confined space entry gear and sampling equipment.

While preparing to conduct sampling it was evident that people had been in the building. There was debris in various places throughout the former Melt Shop that was not present the last time we were on site. Many electrical equipment panels had been smashed, and debris had been piled in various places. It appeared someone had been collecting copper wire and/or components and breaking open equipment to retrieve copper inside of them. Some debris appeared to have fallen or had been dropped from the overhead gantry cranes. We walked around the facility to make sure no one was present. We observed similar conditions in other areas throughout the facility (smashed electrical panels/equipment, evidence of people stealing scrap metal). We also found evidence of human waste and used hypodermic needles.

During our inspection we checked the second-floor transformers upstairs and south of the former Arc Furnace Pit. Both transformers had been broken open, and oil was covering the floor around transformer TC-24. No oil was observed around the second transformer (unknown number/label), even though the top had been pried off, and a winch had been hung from an overhead beam to lift the top, and possibly internal components, out. At least two hypodermic needles were visible on the floor near the TC-24 transformer. Food and cigarette butts were also visible, and it appeared someone had spent a significant amount of time working to open the transformers. Ceramic bushings had been smashed and broken on the floor surrounding both transformers, and a sledge hammer was visible next to Transformer TC-24. The floor had visible holes in it, and oil was visible on the first floor beneath the TC-24 transformer room. In addition, what appeared to be footprints were visible near the oil on the first floor, indicating minor amounts of oil may have been tracked around. Less than 5-gallons of oil were estimated to have been spilled from the TC-24 transformer.

A sample of the transformer oil was collected from a puddle on the floor using a new, dedicated, oil absorbent pad. The absorbent pad was soaked in oil and wrung out into a laboratory supplied sampling jar. The sample was identified as "SF-transformer oil-09162020", and it was submitted to Onsite Environmental on a rush turnaround for analysis of PCBs by EPA Method 8082.

A calculation sheet is attached documenting the quantity of PCBs estimated to have been released from the Transformer.

☒ THIS FIELD REPORT IS FINAL

FIELD REPRESENTATIVE:

Nathan Moxley, LG, LHG

DATE:

9/17/2020

☒ THIS FIELD REPORT IS FINAL

REVIEWED BY:

DAVID HILL, PE, CHMM, CPEA

DATE:

9/17/2020

This report presents observations and a record of field activities relating to our services only. Other work may have been performed on this project that was not under the direction or guidance of DH Environmental, Inc. Our work did not include supervision or direction of the work of others. DH Environmental, Inc. is not responsible for job or site safety of others on this project. **DISCLAIMER:** Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by DH Environmental, Inc. and will serve as the official document of record.

ATTACHMENTS:

☒ Site Photos ☐ Sketch ☐ Chain of Custody ☒ Other: PCB Release Quantity Calculation; Onsite Lab Report # 2009-155
☐ Sample Log ☐ Drawing(s) ☐ Calibration Records

Attachment 1 – Photo Log
Star Forge Break-In and Transformer Spill
9/16/2020



Photo 1: Transformer TC-24. Spilled oil visible on the floor. Taken from the 2nd floor TC-24 Transformer room.

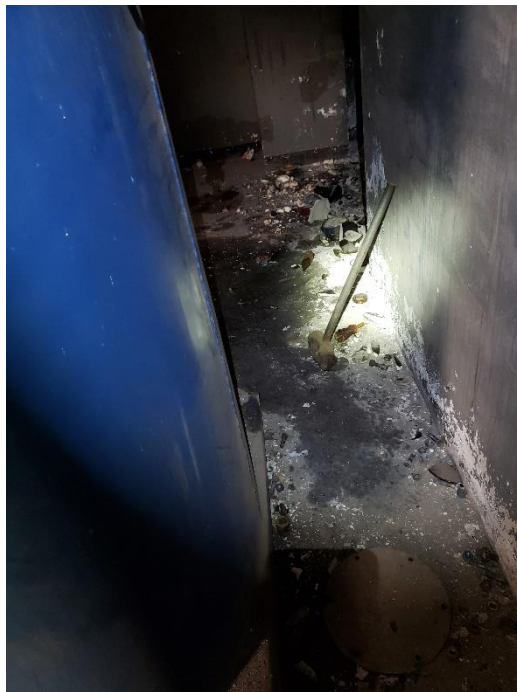


Photo 2: Area behind transformer TC-24. Sledge hammer visible that was used to smash ceramic insulators/bushings from transformer and adjacent connections. Taken from the 2nd floor TC-24 Transformer room.



Photo 3: PCB oil on the floor behind transformer TC-24. Broken ceramic insulators and debris also visible. A hypodermic needle is visible in the background. Taken from the 2nd floor TC-24 Transformer room.



Photo 4: Hypodermic needle next to the TC-24 transformer. Taken from the 2nd floor TC-24 Transformer room.



Photo 5: Spilled oil on the first floor beneath the TC-24 transformer room. Oil had dripped through the ceiling due to holes in the upstairs floor. Footprints are visible in the oil in the foreground.



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 17, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2009-155

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on September 16, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 17, 2020
Samples Submitted: September 16, 2020
Laboratory Reference: 2009-155
Project: Star Forge

Case Narrative

Samples were collected on September 16, 2020 and received by the laboratory on September 16, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 17, 2020
 Samples Submitted: September 16, 2020
 Laboratory Reference: 2009-155
 Project: Star Forge

PCBs EPA 8082A

Matrix: Oil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: SF-Transformer Oil-09162020						
Laboratory ID: 09-155-01						
Aroclor 1016	ND	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1221	ND	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1232	ND	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1242	ND	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1248	ND	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1254	1400	200	EPA 8082A	9-16-20	9-16-20	
Aroclor 1260	ND	200	EPA 8082A	9-16-20	9-16-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	---	63-125				S



Date of Report: September 17, 2020
 Samples Submitted: September 16, 2020
 Laboratory Reference: 2009-155
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Oil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0916O1					
Aroclor 1016	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1221	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1232	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1242	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1248	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1254	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Aroclor 1260	ND	0.99	EPA 8082A	9-16-20	9-16-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	108	63-125				

Analyte	Result				Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	09-155-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	NA	NA	9.92	9.84	NA	NA	NA	54-121	NA	15	A
Surrogate:											
DCB						119	112	63-125			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

Company:
DH Environmental

Project Number:

Project Name:
Star Forge

Project Manager:
David Hill

Sampled by:
Nathan Moxley

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ **Best available**
(other)

Number of Containers

Laboratory Number: 09-155

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH	NWTPH	NWTPH	NWTPH	Volatiles	Halogenes	EDB EL	Semivolatiles (with LC)	PAHs	PCBs	Organics	Organics	Chlorinated	Total R	Total M	TCLP	HEM (C)						% Moisture
1	SF-Transformer Oil - 09162020	9/16/20	1155	liquid	1											X												
																			</									

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		DH Env.	9-16-20	1250	Send results to davehill@dhenviro.com
Received		SPEEDY	9/16/20	1250	
Relinquished		SPEEDY	9/16/20	1:19	
Received		CSE	9/16/20	1318	
Relinquished					
Received					Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Star Forge

Transformer Spill 9/17/2020

PCB Release Quantity Calculation

Specific gravity of transformer oils	= ~ 0.9 ⁽¹⁾
Density of Water	= ~ 1 g/cm ³ ⁽²⁾
	= 3.79 kg/gal
Estimated spill volume	= less than 5-gallons
PCB concentration of spilled oil	= 1,400 mg/kg ⁽³⁾

Mass of Spilled PCBs:

Mass of oil: 5-gallons oil x 3.79 kg/gal x 0.9	= 17.1 kg oil
Mass PCBs: 17.1 kg oil x 1,400 mg/kg PCBs	= 23,940 mg PCBs
	= 0.05 pounds

Reportable Quantity (RQ) Calculations:

Federal RQ for PCBs	= 1 lb ⁽⁴⁾
	= 453,592 mg

$$\text{Volume oil required to reach RQ: } \frac{(X)(3.79 \frac{\text{kg}}{\text{gal}})(0.9)(1,400 \frac{\text{mg}}{\text{kg}} \text{ PCBs})}{453,592 \text{ mg PCBs}}$$

Where X = volume of oil required to reach RQ

$$X = \frac{453,592 \text{ mg PCBs}}{(3.79 \frac{\text{kg}}{\text{gal}})(0.9)(1,400 \frac{\text{mg}}{\text{kg}} \text{ PCBs})} = 95 \text{ gallons}$$

¹ Transformer Oil Chemical Data Sheet, density at 59-deg F (15-deg C);
<https://cameochemicals.noaa.gov/chemical/12205>

² <https://pubchem.ncbi.nlm.nih.gov/compound/Water#section=Density>

³ Onsite Environmental Lab Report # 2009-155

⁴ 40 CFR § 302.4 - Designation of hazardous substances



1011SW Klickitat Way, Suite 107
Seattle, WA 98134

Via Email

25 September 2020

Katy Harvey
Hazardous Waste & Toxics Reduction Program
Washington Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008
kgib461@ecy.wa.gov

Re: Response to Vandalism/transformer fluid spill at former Jorgensen Forge facility

Dear Ms. Harvey:

I'm writing in response to your email of September 17 to provide information on our initial cleanup.

As you know, the spill of transformer fluid resulted from vandalism and attempted theft by one or more trespassers on the property. The spill occurred indoors on the second floor above ground level. Initial figures showing the approximate location of the spill are attached.

The attached photo log includes photos of the transformer from which the release occurred. The green label on the transformer indicates it has been tested and found to contain less than 50 ppm PCBs. The transformer previously had been drained of PCBs, possibly by a prior owner, and in any event was not in use. The release occurred because someone, presumably to get at copper that could be stripped from the unit and sold, smashed the transformer with a sledgehammer, and released residual oil still contained in the unit.

We don't know exactly when that illegal activity occurred. The area in which the vandalism took place is fenced. There have recently been a number of break-ins to the site, including an arrest made by the Tukwila Police Department this month, but the damage to transformer TC-24, and the consequent spill, was not discovered until last week during a sampling event. We have conservatively assumed that the spill occurred more than 72 hours before the cleanup began. Therefore, the cleanup will be conducted under the performance based cleanup requirements of 40 CFR 761.61(b). Proceeding in this manner is in accordance with the June 2014 Version of the PCB Q&A Manual.

The waste generated has been and will continue to be managed as TSCA waste and will be disposed of at Chemical Waste Management in Arlington, Oregon, a TSCA-approved facility. The initial cleanup waste (absorbent and loose impacted debris) has been shipped off-site for disposal in less than 30 days in

accordance with 40CFR § 761.65(c). The waste was shipped on 9/25/2020. A photo of the manifest and approved profile is attached.

We are evaluating the approach to completing cleanup. Final disposal records and confirmation samples from the cleanup will be provided in our final report when the cleanup is complete.

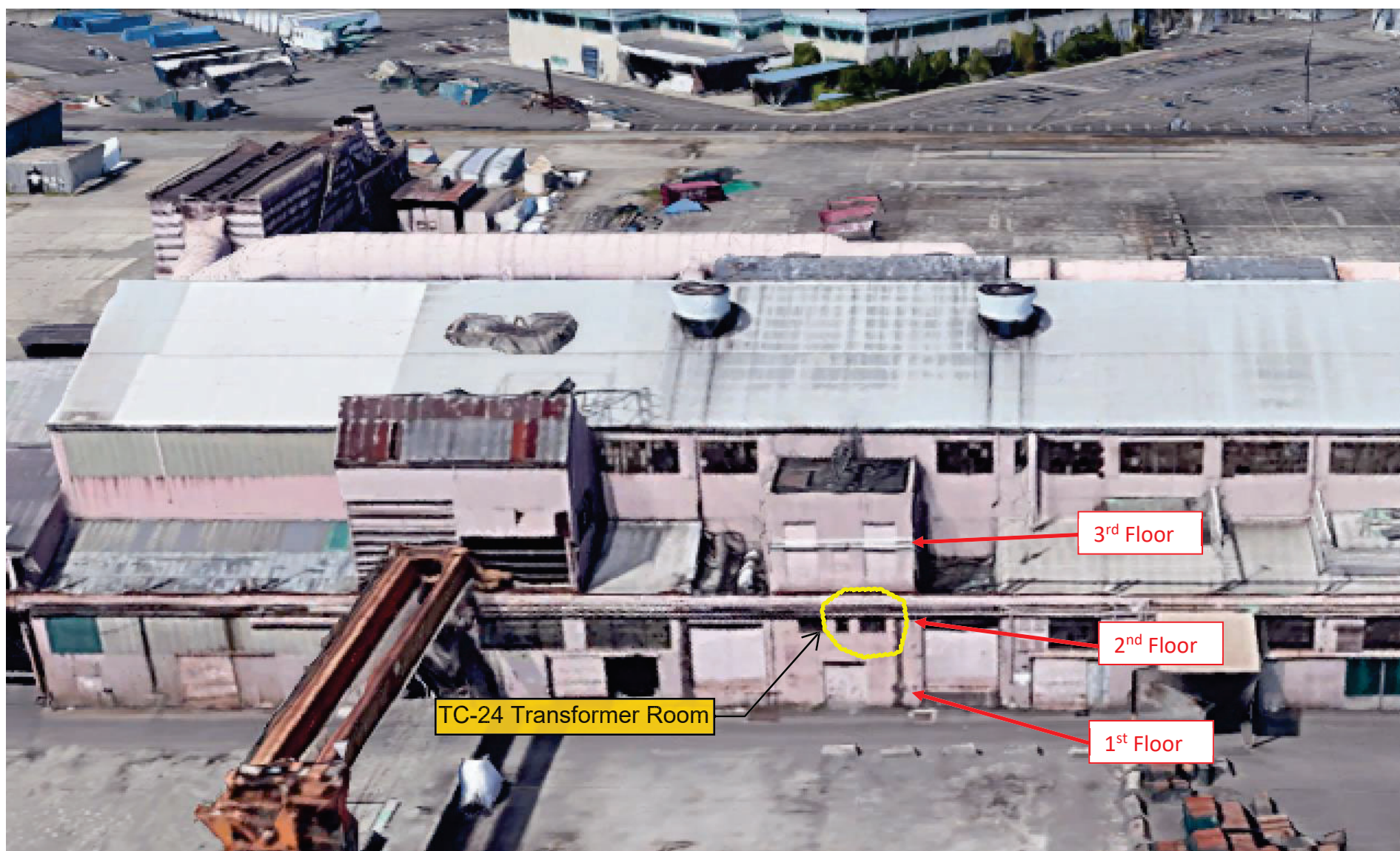
Further security measures are being taken on-site to prevent site trespassers. These further measures include additional fencing around the main structures, additional lighting, and close coordination with the Tukwila Police Department.

Please contact me at the below number or email with any questions.

Thank you,

A handwritten signature in blue ink that reads "David J. Hill". The signature is stylized with a large, flowing "D" and "H".

David Hill, PE, CHMM, CPEA
Principal
DH Environmental, Inc.
(206) 293-3126
davehill@dhenviro.com



View to the north showing the former Melt Shop Area. Transformer TC-24 is located on the 2nd floor behind the window marked in yellow. Transformer oil also dripped through holes in the floor to the first floor directly beneath the TC-24 room.

Photo Log
Star Forge Break-In and Transformer Spill
9/17/2020 – Post Cleanup Response Pictures

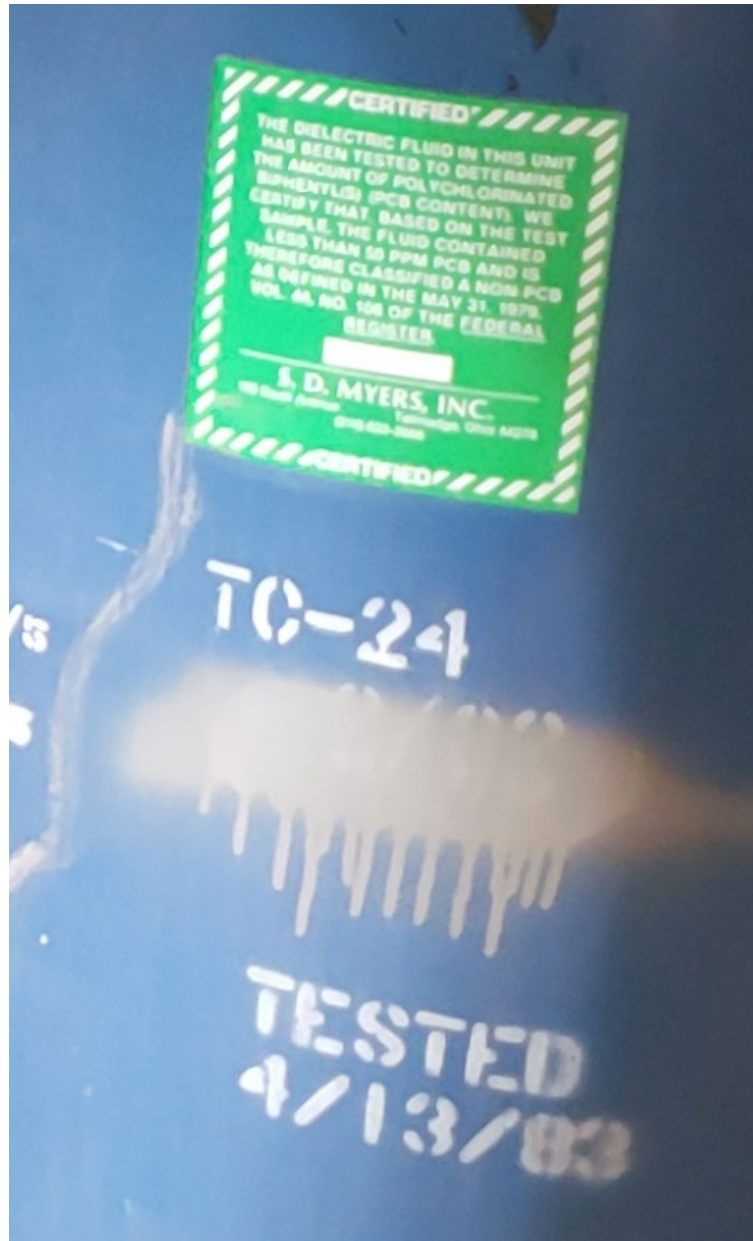


Photo 1: Transformer TC-24. The green label indicates the transformer was sampled and is a non-PCB transformer.



Photo 2: Transformer TC-24 Spill Area (second level) prior to cleanup actions.



Photo 3: Transformer TC-24 Spill Area (second level) after to cleanup actions.



Photo 4: Transformer TC-24 Spill Area (second level) after to cleanup actions. The drain valve was damaged but has now been secured. A spill pad has been placed on the ground to capture any drips and visqueen was placed on the ground of the impacted area.



Photo 5: First level spill area prior to cleanup actions.



Photo 6: First level spill area after cleanup actions.



Photo 7: Drummed Cleanup Media in the Tote Storage Area



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 18, 2020

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2009-170

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on September 17, 2020.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 18, 2020
Samples Submitted: September 17, 2020
Laboratory Reference: 2009-170
Project: Star Forge

Case Narrative

Samples were collected on September 17, 2020 and received by the laboratory on September 17, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 18, 2020
 Samples Submitted: September 17, 2020
 Laboratory Reference: 2009-170
 Project: Star Forge

PCBs EPA 8082A

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: TC-24-conc-first floor						
Laboratory ID: 09-170-01						
Aroclor 1016	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1221	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1232	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1242	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1248	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1254	200	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1260	ND	10	EPA 8082A	9-17-20	9-18-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	---	46-125				S
Client ID: TC-24-conc-1-2nd floor						
Laboratory ID: 09-170-02						
Aroclor 1016	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1221	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1232	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1242	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1248	ND	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1254	30	10	EPA 8082A	9-17-20	9-18-20	
Aroclor 1260	ND	10	EPA 8082A	9-17-20	9-18-20	
<i>Surrogate: Percent Recovery Control Limits</i>						
DCB	---	46-125				S



Date of Report: September 18, 2020
 Samples Submitted: September 17, 2020
 Laboratory Reference: 2009-170
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Solid
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0917S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1221	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1232	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1242	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1248	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1254	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Aroclor 1260	ND	0.050	EPA 8082A	9-17-20	9-18-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	90	46-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0917S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.429	0.442	0.500	0.500	N/A	86	88	50-134	3	18	
Surrogate:											
DCB						92	92	46-125			



Date of Report: September 18, 2020
 Samples Submitted: September 17, 2020
 Laboratory Reference: 2009-170
 Project: Star Forge

PCBs EPA 8082A

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: TC-24-wipe-2nd floor						
Laboratory ID: 09-170-03						
Aroclor 1016	ND	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1221	ND	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1232	ND	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1242	ND	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1248	ND	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1254	24000	4000	EPA 8082A	9-17-20	9-18-20	
Aroclor 1260	ND	4000	EPA 8082A	9-17-20	9-18-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	---	75-112				S



Date of Report: September 18, 2020
 Samples Submitted: September 17, 2020
 Laboratory Reference: 2009-170
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0917P1					
Aroclor 1016	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1221	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1232	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1242	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1248	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1254	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Aroclor 1260	ND	2.0	EPA 8082A	9-17-20	9-17-20	
Surrogate:	Percent Recovery	Control Limits				
DCB	94	75-112				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0917P1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	18.7	18.4	20.0	20.0	N/A	94	92	83-124	2	15
Surrogate:										
DCB						97	96	75-112		





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





**Onsite
Environmental Inc.**

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☒ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)

☒ Best available
(other)

Laboratory Number:

09-170

Company: **OH Environmental**
Project Number:
Project Name: **Star Forge**
Project Manager: **David Hill**
Sampled by: **Nathan Moxley**

Lab ID
Sample Identification
Date Sampled
Time Sampled
Matrix

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx (☐ Acid / SG Clean-up)	
Volatiles 8260C	
Halogenated Volatiles 8260C	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
% Moisture	

1	TC-24-conc-first floor	9-17-20	1320	Solid	1
2	TC-24-conc-1-2nd floor	↓	1340	↓	1
3	TC-24-wipe-2nd floor	↑	1350	wipe	1

X ↑

Signature

Company

Date

Time

Comments/Special Instructions

Send results to dave.hill@onsite-env.com

OH Env.

9-17-20

1455

[Signature]

OSI

9/17/20

1455

Relinquished
Received
Relinquished
Received
Relinquished
Received
Relinquished
Received
Reviewed/Date

Reviewed/Date

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐



Requested Facility: Chemical Waste Management (Hazardous Waste Facility) ☐ Unsure Profile Number: OR345688
☐ Multiple Generator Locations (Attach Locations) ☐ Request Certificate of Disposal ☐ Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: Star Forge LLC dba Jorgensen Forge
2. Site Address: 8531 E Marginal Way S
(City, State, ZIP) Seattle WA 98108
3. County: _____
4. Contact Name: Wayne Turk
5. Email: _____
6. Phone: (206) 255-8177 7. Fax: _____
8. Generator EPA ID: WAD000602813 ☐ N/A
9. State ID: WAD000602813 ☐ N/A

C. MATERIAL INFORMATION

1. Common Name: PCB01 - TSCA Regulated Cleanup Debris
Describe Process Generating Material: ☐ See Attached

Spill debris and absorbents from cleanup of TSCA regulated transformer release.

2. Material Composition and Contaminants: ☐ See Attached

1. TSCA Debris - PPE, Plastic, Absorbents	100 %
2. Polychlorinated Biphenyls	<1400 mg/kg
3.	
4.	
Total comp. must be equal to or greater than 100%	≥100%

3. State Waste Codes: _____ ☐ N/A
4. Color: Varies
5. Physical State at 70°F: ☒ Solid ☐ Liquid ☐ Other: _____
6. Free Liquid Range Percentage: _____ to _____ ☒ N/A
7. pH: 4 to 11 ☐ N/A
8. Strong Odor: ☐ Yes ☒ No Describe: _____
9. Flash Point: ☐ <140°F ☐ 140°–199°F ☒ ≥200° ☐ N/A

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ☒ Yes
Please identify applicable samples and/or lab reports:

All

2. Other information attached (such as MSDS)? ☐ Yes

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 – Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

☒ I am an Authorized Agent signing on behalf of the Generator, and I have confirmed with the Generator that information contained in this profile, as well as supporting documents provided, are accurate and complete.

Name (Print): Scott St. John Date: 09/18/2020
Title: Director of Project Services
Company: DH Environmental

THINK GREEN.®**B. BILLING INFORMATION**☐ SAME AS GENERATOR

1. Billing Name: DH Environmental, Inc.
2. Billing Address: 1011 SW Klickitat Way, Suite 107
(City, State, ZIP) Seattle WA 98134
3. Contact Name: Scott St John
4. Email: scottstjohn@dhenviro.com
5. Phone: (206) 327-0026 6. Fax: _____
7. WM Hauled? ☐ Yes ☒ No
8. P.O. Number: _____
9. Payment Method: ☒ Credit Account ☐ Cash ☐ Credit Card

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ☐ Yes* ☒ No
Code: _____
2. State Hazardous Waste? ☒ Yes ☐ No
Code: X002
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? ☐ Yes* ☒ No
4. Contains Underlying Hazardous Constituents? ☐ Yes* ☒ No
5. From an industry regulated under Benzene NESHAP? ☐ Yes* ☒ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ☐ Yes* ☒ No
7. CERCLA or State-mandated clean-up? ☐ Yes* ☒ No
8. NRC or State-regulated radioactive or NORM waste? ☐ Yes* ☒ No
***If Yes, see Addendum (page 2) for additional questions and space.**
9. Contains PCBs? → If Yes, answer a, b and c. ☒ Yes ☐ No
a. Regulated by 40 CFR 761? ☒ Yes ☐ No
b. Remediation under 40 CFR 761.61 (a)? ☐ Yes ☒ No
c. Were PCB imported into the US? ☐ Yes ☒ No
10. Regulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☒ No
11. Contains Asbestos? ☐ Yes ☒ No
→ If Yes: ☐ Non-Friable ☐ Non-Friable – Regulated ☐ Friable

F. SHIPPING AND DOT INFORMATION

1. ☒ One-Time Event ☐ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 2
☐ Tons ☐ Yards ☒ Drums ☐ Gallons ☐ Other: _____
3. Container Type and Size: 55 Gal DM
4. USDOT Proper Shipping Name: _____ ☐ N/A
UN3432, POLYCHLORINATED BIPHENYLS, SOLID MIXTURE, 9, PG II

Certification Signature*Scott St. John*

0Fde9d442a...



Only complete this Addendum if prompted by responses on EZ Profile™ (page 1) or to provide additional information. Sections and question numbers correspond to EZ Profile™.

Profile Number: OR345688

C. MATERIAL INFORMATION

Describe Process Generating Material (Continued from page 1):

If more space is needed, please attach additional pages.

Material Composition and Contaminants (Continued from page 1):

If more space is needed, please attach additional pages.

5.	
6.	
7.	
8.	
9.	
Total composition must be equal to or greater than 100%	
	≥100%

D. REGULATORY INFORMATION

Only questions with a "Yes" response in Section D on the EZ Profile™ form (page 1) need to be answered here.

1. EPA Hazardous Waste

a. Please list all USEPA listed and characteristic waste code numbers:

b. Is the material subject to the Alternative Debris standards (40 CFR 268.45)?

☐ Yes ☐ No

c. Is the material subject to the Alternative Soil standards (40 CFR 268.49)? → If Yes, complete question 4.

☐ Yes ☐ No

d. Is the material exempt from Subpart CC Controls (40 CFR 264.1083)?

☐ Yes ☐ No

→ If Yes, please check **one** of the following:

☐ Waste meets LDR or treatment exemptions for organics (40 CFR 264.1082(c)(2) or (c)(4))

☐ Waste contains VOCs that average <500 ppmw (CFR 264.1082(c)(1)) – will require annual update.

2. State Hazardous Waste → Please list all state waste codes: _____

3. For material that is Treated, Delisted, or Excluded → Please indicate the category, below:

☐ Delisted Hazardous Waste

☐ Excluded Waste under 40 CFR 261.4 → Specify Exclusion: _____

☐ Treated Hazardous Waste Debris

☐ Treated Characteristic Hazardous Waste → If checked, complete question 4.

4. Underlying Hazardous Constituents → Please list all Underlying Hazardous Constituents:

5. Industries regulated under Benzene NESHAP include petroleum refineries, chemical manufacturing plants, coke by-product recovery plants, and TSDFs.

a. Are you a TSDF? → If yes, please complete Benzene NESHAP questionnaire. If not, continue.

☐ Yes ☐ No

b. Does this material contain benzene?

☐ Yes ☐ No

1. If yes, what is the flow weighted average concentration?

_____ ppmw

c. What is your facility's current total annual benzene quantity in Megagrams?

☐ <1 Mg ☐ 1–9.99 Mg ☐ ≥10 Mg

d. Is this waste soil from a remediation?

☐ Yes ☐ No

1. If yes, what is the benzene concentration in remediation waste?

_____ ppmw

e. Does the waste contain >10% water/moisture?

☐ Yes ☐ No

f. Has material been treated to remove 99% of the benzene or to achieve <10 ppmw?

☐ Yes ☐ No

g. Is material exempt from controls in accordance with 40 CFR 61.342?

☐ Yes ☐ No

→ If yes, specify exemption: _____

h. Based on your knowledge of your waste and the BWON regulations, do you believe that this waste stream is subject to treatment and control requirements at an off-site TSDF?

☐ Yes ☐ No

6. 40 CFR 63 GGGGG → Does the material contain <500 ppmw VOHAPs at the point of determination?

☐ Yes ☐ No

7. CERCLA or State-Mandated clean up → Please submit the Record of Decision or other documentation with process information to assist others in the evaluation for proper disposal. A "Determination of Acceptability" may be needed for CERCLA wastes not going to a CERCLA approved facility.

8. NRC or state regulated radioactive or NORM Waste → Please identify Isotopes and pCi/g: _____

Please print or type.

1. Generator ID Number WAD000602813		2. Page 1 of 1		3. Emergency Response Phone 800-337-7455		4. Manifest Tracking Number 021751122 JJK	
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 9531 E Marginal Way S Seattle WA 98108				Generator's Site Address (if different than mailing address) At: Wayne R Turk			
6. Generator's Phone 206 255-8177				U.S. EPA ID Number WAH000047217			
7. Transporter 1 Company Name DH Environmental Inc.				U.S. EPA ID Number ORD089452353			
8. Transporter 2 Company Name Chemical Waste Management				U.S. EPA ID Number ORD089452353			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17820 CEDAR SPRINGS LANE ARLINGTON OR 97812							
Facility's Phone 541 454-2843							
GENERATOR	10. Containers	11. Total Quantity		12. Unit, Wt./Vol.	13. Waste Codes		
	No.	Type					
	1	02 DM 100	K		NONE		
	2						
	3						
14. Special Handling Instructions and Additional Information Profile# OR045688 ERG# 121 Out Of Service Date 9-16-2020 Unique Drum ID: StarFrgDrum1, StarFrgDrum2							
15. GENERATOR/OFFEROR'S CERTIFICATION. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 49 CFR 262.27(a) (if I am a large quantity generator) or (b)(4) (if I am a small quantity generator) is true.							
Generator/Offeror's Printed/Typed Name on behalf of Star Forge Leonard J. Warrick DBA Jorgensen Forge							
Signature Leonard J. Warrick							
Month Day Year 09 25 20							
TRANSPORTER INTL.	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/leave Date leaving						
	Transporter signature (for exports only): Jacob Briere						
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Jacob Briere Signature J. Briere Transporter 2 Printed/Typed Name G. Pinaula Signature G. Pinaula						
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number: U.S. EPA ID Number						
	18b. Alternate Facility (or Generator) Facility's Phone: U.S. EPA ID Number						
	18c. Signature of Alternate Facility (or Generator) Month Day Year						
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1 2 3 4						
	20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a. Printed/Typed Name: Signature Month Day Year						



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DANGER
PCBs

DANGER
PCBs



HAZARD
PCBs



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 20, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge Powerhouse Cleanup
Laboratory Reference No. 2312-241

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on December 20, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2023
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-241
Project: Star Forge Powerhouse Cleanup

Case Narrative

Samples were collected on December 19, 2023 and received by the laboratory on December 20, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: December 20, 2023
 Samples Submitted: December 20, 2023
 Laboratory Reference: 2312-241
 Project: Star Forge Powerhouse Cleanup

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Powerhouse-SS-NW-1.5						
Laboratory ID: 12-241-01						
Aroclor 1016	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.053	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.053	EPA 8082A	12-20-23	12-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 83 50-127</i>						
Client ID: Powerhouse-SS-NE-1.5						
Laboratory ID: 12-241-02						
Aroclor 1016	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.054	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.054	EPA 8082A	12-20-23	12-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 89 50-127</i>						
Client ID: Powerhouse-SS-SW-1.5						
Laboratory ID: 12-241-03						
Aroclor 1016	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.055	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.055	EPA 8082A	12-20-23	12-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 81 50-127</i>						



Date of Report: December 20, 2023
 Samples Submitted: December 20, 2023
 Laboratory Reference: 2312-241
 Project: Star Forge Powerhouse Cleanup

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Powerhouse-SS-SE-1.5						
Laboratory ID: 12-241-04						
Aroclor 1016	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.056	EPA 8082A	12-20-23	12-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 85 50-127</i>						
Client ID: Powerhouse-Dup-1						
Laboratory ID: 12-241-05						
Aroclor 1016	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.056	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.056	EPA 8082A	12-20-23	12-20-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 84 50-127</i>						



Date of Report: December 20, 2023
 Samples Submitted: December 20, 2023
 Laboratory Reference: 2312-241
 Project: Star Forge Powerhouse Cleanup

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1220S1					
Aroclor 1016	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1221	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1232	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1242	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1248	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1254	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1260	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1262	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Aroclor 1268	ND	0.050	EPA 8082A	12-20-23	12-20-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1220S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.500	0.479	0.500	0.500	N/A	100	96	55-119	4	34	
Surrogate:											
DCB						101	101	50-127			



Date of Report: December 20, 2023
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-241
Project: Star Forge Powerhouse Cleanup

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
Powerhouse-SS-NW-1.5	12-241-01	6	12-20-23
Powerhouse-SS-NE-1.5	12-241-02	7	12-20-23
Powerhouse-SS-SW-1.5	12-241-03	10	12-20-23
Powerhouse-SS-SE-1.5	12-241-04	10	12-20-23
Powerhouse-Dup-1	12-241-05	10	12-20-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Onsite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: DK Environmental			Turnaround Request (in working days) (Check One) ☒ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☒ Best Available (other)		
Project Number:			Laboratory Number: 12-241		
Project Name: Star Forge Potthouse Cleanup					
Project Manager: Dave Hill					
Sampled by: N. Maxley					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	Potthouse - SS - NW - 1.5	12/19/23	1400	S	1
2	Potthouse - SS - NE - 1.5		1410		1
3	Potthouse - SS - SW - 1.5		1420		1
4	Potthouse - SS - SE - 1.5		1430		1
5	Potthouse - D-P-1		1440		1
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 <input 6"="" type="checkbox/>)</td></tr><tr><td colspan="/> NWTPH-Gx					
NWTPH-Dx (SG Clean-up <input 6"="" type="checkbox/>)</td></tr><tr><td colspan="/> Volatiles 8260					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level)					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
%					
Moisture					
Signature: Mark Maxley Company: DK Environmental Date: 12/19/23 Time: 1900					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Reviewed/Date					
Reviewed/Date					
Data Package: Standard ☒ Level III ☐ Level IV ☐					
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐					

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page #	3. Emergency Response Phone	4. Manifest Tracking Number	
		WAD000802813	28	800-337-7455	021751122 JJK	
5. Generator's Name and Mailing Address		Att: Wayne R Turk Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108						
Generator's Phone: 206 255-8177						
6. Transporter 1 Company Name		U.S. EPA ID Number				
DH Environmental Inc.		WAH000047217				
7. Transporter 2 Company Name		U.S. EPA ID Number				
Chemical Waste Management		ORD089452353				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812		ORD089452353				
Facility's Phone: 541 454-2843						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
		No.	Type			
X	1. UN3432, Polychlorinated biphenyls, solid 9, PGII	02	DM	100	K	NONE
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
Profile# OR345688 ERG# 171 Out Of Service Date 9-16-2020 Unique Drum ID: StrFrgDrum1, StrFrgDrum2 50K 50K 10/14/20 WMXU 970221						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b)(4) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name		Signature		Month	Day	Year
Leonard J. Warnock on behalf of Star Forge DBA Jorgensen Forge		Leonard J. Warnock		09	25	20
16. International Shipments		Port of entry/exit:		Date leaving U.S.:		
☐ Import to U.S.		☐ Export from U.S.				
Transporter signature (for exports only):						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Jacob Briere		[Signature]		09	25	20
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
J. Pinanla		[Signature]		9	25	20
18. Discrepancy						
18a. Discrepancy Indication Space		☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection				
Added individual weight for PCB Drums		Per Scott St John, Director of Project Services / DH Environmental 10/14/20				
Manifest Reference Number:		U.S. EPA ID Number				
18b. Alternate Facility (or Generator)						
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)		Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.		2.		3.		4.
H3Z						
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year
Dawn Dwyer		[Signature]		10	17	20

gm

478348

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAD000602813	22. Page 2 of 2	23. Manifest Tracking Number 021751122 JJK		
24. Generator's Name STAR FORGE DBA JORGENSEN FORGE 8531 E MARGINAL WAY S SEATTLE WA 98108-4018						
25. Transporter UNION PACIFIC RAILROAD		U.S. EPA ID Number NED001792910				
26. Transporter COLUMBIA RIDGE LANDFILL		U.S. EPA ID Number ORD987173457				
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		No.	Type			
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
32. Special Handling Instructions and Additional Information CONTAINER # VMXU 970221						
33. Transporter Acknowledgment of Receipt of Materials Printed/Typed Name G. Altheimer Signature G. Altheimer Month 7 Day 15 Year 00						
34. Transporter Acknowledgment of Receipt of Materials Printed/Typed Name Jennifer Williams Signature Jennifer Williams Month 10 Day 3 Year 20						
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 33064

Customer Name DH ENVIRONMENTAL DH ENVIRONME Carrier CRL Columbia Ridge Landfill
Ticket Date 10/16/2020 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 478348 Driver
Hauling Ticket# ESP Check#
Route Billing # 0000107
State Waste Code Gen EPA ID
Manifest 021751122JJK
Destination Grid
PO 478348
Profile OR345688 (PCB01 - TSCA REGULATED CLEANUP)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC 8531 E MARGINAL WAY S SEATTLE WA 98108

	Time	Scale	Operator	Inbound	Gross	220 lb*
In	10/16/2020 07:24:32	MANUAL WT	tlane		Tare	
Out	10/16/2020 07:24:32		tlane		Net	220 lb
Comments			* Manual Weight		Tons	0.11

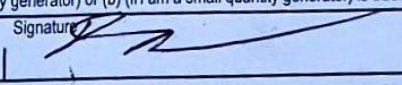
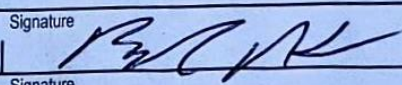
Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA DRM-Each DM55 100		2.00	Each	85.00	2.20	\$170.00	WA-SEATTLE
2 EVFt-P10-Environme 100			%	10.00		\$23.50	WA-SEATTLE
3 TRANS EA DRUM-TRAN 100		2.00	Each	20.00		\$40.00	WA-SEATTLE
4 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	

Total Tax	\$2.20
Total Ticket	\$260.70

Driver`s Signature

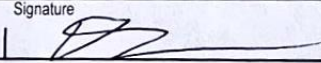
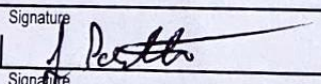
Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WA0000602813		2. Page 1 of 1	3. Emergency Response Phone (800) 424-9300	4. Manifest Tracking Number 018614506 FLE		
5. Generator's Name and Mailing Address Star Forge DBA Jorgensen Forge 8531 - Edmundo Way S Seattle, WA 98108-4018						Generator's Site Address (if different than mailing address)		
Generator's Phone: 206-762-1100								
6. Transporter 1 Company Name R-Transport Inc						U.S. EPA ID Number WA000028338		
7. Transporter 2 Company Name						U.S. EPA ID Number		
8. Designated Facility Name and Site Address Chemical Waste Management - Inc. 17629 Cedar Springs Lane Clatskanie, OR 97012-9709						U.S. EPA ID Number OR089452353		
Facility's Phone: 541-454-2643								
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))			10. Containers No. Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.	RQ- UN3432 Polychlorinated Biphenyls, solid 9.1			01 DT		K	102
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information 1. OR3577A PCB Impacted Debris; EIS# 171 (RQ = 1 LB) 1. PCB out of service date 12-21-23 weight —, Type — R-77								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Officer's Printed/Typed Name Dan Kohde						Signature  Month Day Year 12 27 23		
TRANSPORTER	16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____					
	Transporter signature (for exports only): _____							
DESIGNATED FACILITY	17. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name Brandon Hersley				Signature 		Month Day Year 12 27 23	
Transporter 2 Printed/Typed Name				Signature		Month Day Year		
18. Discrepancy								
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection								
Manifest Reference Number: _____ U.S. EPA ID Number _____								
18b. Alternate Facility (or Generator)								
Facility's Phone: _____								
18c. Signature of Alternate Facility (or Generator)								
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1.		2.		3.		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name						Signature		
						Month Day Year		

Please print or type.

Form Approved. OMB No. 2050-0039

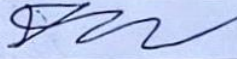
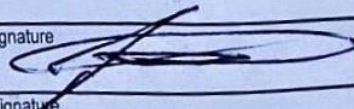
UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD000602813	2. Page 1 of 1	3. Emergency Response Phone (800) 424-9300	4. Manifest Tracking Number 018614507 FLE	
5. Generator's Name and Mailing Address Star Forge DBA Torgeaser Forge 8531 - EMERALD WAY S Seattle, WA 98105, 41018				Generator's Site Address (if different than mailing address)		
Generator's Phone: 206-767-1100				U.S. EPA ID Number WAD00028338		
6. Transporter 1 Company Name R-Transport				U.S. EPA ID Number		
7. Transporter 2 Company Name				U.S. EPA ID Number OR089452353		
8. Designated Facility Name and Site Address Chemical Waste Management, Inc 17629 - Cedar Springs Lane Arlington OR 97012-9709				U.S. EPA ID Number OR089452353		
Facility's Phone: 541-454-2643						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
1.	RQ 01 3432 Polychlorinated Biphenyls solid q. 11	01 DT		27,000	K	402
2.						
3.						
4.						
14. Special Handling Instructions and Additional Information 1. OR 352299 PCB Impacted debris, ERM 171 Cfg = 1 LB 1. PCB out of service date 12.21.2023 work Type						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name Dan Rude				Signature 		Month Day Year 12/21/23
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Josh Pontino				Signature 		Month Day Year 12/21/23
Transporter 2 Printed/Typed Name				Signature		Month Day Year
18. Discrepancy						
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
18b. Alternate Facility (or Generator)				Manifest Reference Number: _____ U.S. EPA ID Number		
Facility's Phone: _____						
18c. Signature of Alternate Facility (or Generator)						
				Month Day Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. _____ 2. _____ 3. _____ 4. _____						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name				Signature		Month Day Year

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number <u>WA0000602813</u>		2. Page 1 of <u>1</u>	3. Emergency Response Phone <u>(800) 424-9300</u>		4. Manifest Tracking Number 018614508 FLE	
		5. Generator's Name and Mailing Address <u>Star Forge DBA Jorgensen Forge</u> <u>8531 - E Marginal Way S</u> <u>Seattle, WA 98108-4018</u>						
Generator's Phone: <u>206-767-1100</u>		Generator's Site Address (if different than mailing address)						
6. Transporter 1 Company Name <u>R-Transport</u>		U.S. EPA ID Number <u>WA000028338</u>						
7. Transporter 2 Company Name		U.S. EPA ID Number						
8. Designated Facility Name and Site Address <u>Chemical Waste Management, Inc</u> <u>7629 Cedar Springs Lane</u> <u>Arlington OR 97812-9709</u>		U.S. EPA ID Number <u>OR089452353</u>						
Facility's Phone: <u>541-454-2643</u>								
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
			No.	Type				
		1. <u>RQ UN 3432 Polychlorinated Biphenyls solid</u> <u>9-II</u>	<u>01</u>	<u>DT</u>	<u>27000</u>	<u>K</u>	<u>1002</u>	
		2.						
		3.						
		4.						
14. Special Handling Instructions and Additional Information <u>1- OR357799 PCB Infected Debris; ETG# 171 CIG = 1 LB</u> <u>1- PCB out of service date 12 21 2023</u> <u>Weight Type</u>								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Officer's Printed/Typed Name <u>Dan Rohde</u>		Signature <u>[Signature]</u>		Month Day Year <u>12 27 23</u>				
TRANSPORTER	16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____					
	17. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name <u>Kelly Dukart</u>		Signature <u>[Signature]</u>		Month Day Year <u>12 27 23</u>			
	Transporter 2 Printed/Typed Name		Signature		Month Day Year			
DESIGNATED FACILITY	18. Discrepancy							
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection							
	Manifest Reference Number: _____ U.S. EPA ID Number _____							
	18b. Alternate Facility (or Generator)		U.S. EPA ID Number					
	Facility's Phone: _____							
	18c. Signature of Alternate Facility (or Generator)		Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1.		2.		3.		4.		
						Month Day Year		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name		Signature						

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD000602813		2. Page 1 of 1	3. Emergency Response Phone (800) 424-9301	4. Manifest Tracking Number 018614509 FLE	
		Generator's Site Address (if different than mailing address)					
5. Generator's Name and Mailing Address Star Forge DBA Jorgensen Forge 8531 - E Marginal Way S Seattle, WA 98108-4018							
Generator's Phone: 206-967-1100							
6. Transporter 1 Company Name R-Transport							
U.S. EPA ID Number WA0000028558							
7. Transporter 2 Company Name							
U.S. EPA ID Number							
8. Designated Facility Name and Site Address Chemical Waste Management Inc 7629 Cedar Springs Lane Arlington, OR 9712-9709							
Facility's Phone: 541-454-7643							
9a. HM		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
				No.	Type		
1. RQ UN 3432 Polychlorinated Biphenyls Sold		9-11		01	DT	27000	14
2.							
3.							
4.							
13. Waste Codes X002							
14. Special Handling Instructions and Additional Information 1- OR 357799 PCB Impacted Debris; E19 # 171 crg = 1 LB J 1- PCB out of service date 12, 21, 2023 weight - Type							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name Dan Rohde				Signature 		Month Day Year 11/21/23	
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name James Greenwood				Signature 		Month Day Year 12/27/23	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection							
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____							
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. _____		2. _____		3. _____		4. _____	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name				Signature			



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87651

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/17/2024 Vehicle# R77 Volume
Payment Type Credit Account Container
CWM Load# 502367 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 018614506FLE
Destination Grid
PO OR357799
Profile OR357799 (PCB Impacted Debris: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	57141 lb*
In	01/17/2024 10:44:15	MANUAL WT	pslider1		Tare	1 lb*
Out	01/17/2024 10:44:15		pslider1		Net	57140 lb
Comments			* Manual Weight		Tons	28.57

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	28.57	Tons	172.10	571.40	\$4916.90	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.71		\$530.46	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$233.55	WA-TUKWILA
5 TRANS PER TON-TRAN	100	28.57	Tons	86.00		\$2580.00	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$571.40
Total Ticket	\$9007.31

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87650

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/17/2024 Vehicle# R94 Volume
Payment Type Credit Account Container
CWM Load# 502366 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 018614507FLE
Destination Grid
PO OR357799
Profile OR357799 (PCB Impacted Debris: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	45361 lb*
In	01/17/2024 10:40:17	MANUAL WT	pslider1		Tare	1 lb*
Out	01/17/2024 10:40:17		pslider1		Net	45360 lb
Comments			* Manual Weight		Tons	22.68

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		22.68	Tons	172.10	453.60	\$3903.23	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	6.71		\$459.21	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$185.40	WA-TUKWILA
5 TRANS PER TON-TRAN 100		22.68	Tons	86.00		\$2580.00	WA-TUKWILA
6 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$453.60
Total Ticket	\$7756.44

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87653

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/17/2024 Vehicle# R85 Volume
Payment Type Credit Account Container
CWM Load# 502368 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 018614508FLE
Destination Grid
PO OR357799
Profile OR357799 (PCB Impacted Debris: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	46381 lb*
In	01/17/2024 10:51:35	MANUAL WT	pslider1		Tare	1 lb*
Out	01/17/2024 10:51:35		pslider1		Net	46380 lb
Comments			* Manual Weight		Tons	23.19

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	23.19	Tons	172.10	463.80	\$3991.00	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.71		\$465.38	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$189.57	WA-TUKWILA
5 TRANS PER TON-TRAN	100	23.19	Tons	86.00		\$2580.00	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	75.00		\$150.00	WA-TUKWILA

Total Tax	\$463.80
Total Ticket	\$7864.75

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 87649

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/17/2024 Vehicle# 84 Volume
Payment Type Credit Account Container
CWM Load# 502365 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 018614509FLE
Destination Grid
PO OR357799
Profile OR357799 (PCB Impacted Debris: PCB01)
Generator OR-STAR FORGE LLC 8531 STAR FORGE LLC DBA JORGENSEN FORGE 8531 E MARGINAL WA

	Time	Scale	Operator	Inbound	Gross	54101 lb*
In	01/17/2024 10:30:30	MANUAL WT	pslider1		Tare	1 lb*
Out	01/17/2024 10:30:30		pslider1		Net	54100 lb
Comments			* Manual Weight		Tons	27.05

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC 100		27.05	Tons	172.10	541.00	\$4655.31	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	6.71		\$514.42	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$221.13	WA-TUKWILA
5 TRANS PER TON-TRAN 100		27.05	Tons	86.00		\$2580.00	WA-TUKWILA
6 LINER EA-LINER PER 100		2.00	Each	75.00		\$150.00	WA-TUKWILA
7 CERT-CERTIFICATE D 100		1.00	Each	35.00		\$35.00	WA-TUKWILA

Total Tax	\$541.00
Total Ticket	\$8721.86

Driver`s Signature

2-23 504402

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAD0000802813	2. Page 1 of 2	3. Emergency Response Phone 800-337-7455	4. Manifest Tracking Number 025895525 JJK		
5. Generator's Name and Mailing Address Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108		Generator's Site Address (if different than mailing address) Att: Wayne R Turk					
Generator's Phone: 206 255 8177							
6. Transporter 1 Company Name R Transport Inc		U.S. EPA ID Number WAH000028338					
7. Transporter 2 Company Name Union Pacific Railroad		U.S. EPA ID Number NED001792910					
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812		U.S. EPA ID Number ORD089452353					
Facility's Phone: 541 454 2843							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
X	1. RQ UN2315, Polychlorinated biphenyls, solid, mixture 9, PGII	1	CM	1016 1,500 3-4-24	K	NONE X002	
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1) OR357800 -TSCA ERG#171 RQ=1LBS 2240p. Can 8808 Out of service Date 1/24/24 per David Hill/President/Principal							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name Nathan Moxley on behalf of Star Forge				Signature <i>[Signature]</i>		Month Day Year 11 24 24	
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Chris Blum				Signature <i>[Signature]</i>		Month Day Year 1 24 24	
Transporter 2 Printed/Typed Name Alisha Lenius				Signature <i>[Signature]</i>		Month Day Year 11 24 24	
18. Discrepancy							
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection							
Weight correction per David Hill/pres. MW 3-4-24							
18b. Alternate Facility (or Generator)						U.S. EPA ID Number	
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H132		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name Morgan Wolf				Signature <i>[Signature]</i>		Month Day Year 10 31 24	

BMS

504402

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number	22. Page	23. Manifest Tracking Number			
24. Generator's Name STAR Forge LLC DBA Jorgensen Forge		WAD000602813	2	02589.5525JK			
25. Transporter 3 Company Name PCL		U.S. EPA ID Number 0200001180					
26. Transporter _____ Company Name		U.S. EPA ID Number					
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
32. Special Handling Instructions and Additional Information							
33. Transporter 3 Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____							
34. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____							
35. Discrepancy							
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 93461

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/29/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 504402 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895525JJK
Destination Grid
PO OR357800
Profile OR357800 (DRAINED PCB TRANSFORMER CARCASS - TSCA: PCB10)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	2241 lb*
In	03/29/2024 14:08:46	MANUAL WT	tlane		Tare	1 lb*
Out	03/29/2024 14:08:46		tlane		Net	2240 lb
Comments			* Manual Weight		Tons	1.12

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 NonH Disp-Pounds-N 100		2240	lb	0.26	22.40	\$5200.00	WA-TUKWILA
2 ENERGY-Energy Surc 100			%	7.02		\$535.42	WA-TUKWILA
3 MFE-e-Manifest (La 100		1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA 100			%	4.75		\$247.00	WA-TUKWILA
5 RAIL LOAD-RAIL PER 100		1	Load	785.00		\$785.00	WA-TUKWILA
6 TRANS PER LOAD-TRA 100		1	Load	520.00		\$520.00	WA-TUKWILA
7 LINER EA-LINER PER 100		1.00	Each	75.00		\$75.00	WA-TUKWILA
8 RENT DAILY-RENT PE 100		37.00	Each	20.00		\$740.00	
9 CERT35-CERTIFICATE 100		1.00	Each	35.00		\$35.00	

Total Tax \$22.40
Total Ticket \$8184.82

Driver`s Signature

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		WA0000602813	2	800-937-7455	025895526 JJK	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Star Forge LLC DBA Jorgensen Forge 8531 E Marginal Way S Seattle WA 98108 Generator's Phone: 206 255-0177		Att: Wayne R Turk				
6. Transporter 1 Company Name		U.S. EPA ID Number				
R Transport Inc		WAH000028338				
7. Transporter 2 Company Name		U.S. EPA ID Number				
Union Pacific Railroad		NE0001792910				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
CHEMICAL WASTE MANAGEMENT, INC 17829 CEDAR SPRINGS LANE ARLINGTON OR 97812 Facility's Phone: 541 454-2843		ORD089452353				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN2315, Polychlorinated biphenyls, solid, mixture 9, PGII RQ= 1LBS	1	CM	3,000	k	NONE X004
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
1) OR358045-Non-TSCA ERG#171 RQ= 1 LBS Can 8701						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified/packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name		Signature		Month Day Year		
Nathan Moxley on behalf of Star Forge		[Signature]		1 24 24		
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month Day Year		
Chris Blum		[Signature]		1 24 24		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
Alisha Lenius		[Signature]		1 24 24		
18. Discrepancy						
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Manifest Reference Number: _____ U.S. EPA ID Number _____						
18b. Alternate Facility (or Generator)						
Facility's Phone: _____						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.		2.		3.		4.
H132						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month Day Year		
Morgan Wolf		[Signature]		12 27 24		

pms

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number 503602 WAD000602813	22. Page 2	23. Manifest Tracking Number 025895526 JJK		
24. Generator's Name STAR Forge LLC						
25. Transporter 3 Company Name PCA			U.S. EPA ID Number 020000041180			
26. Transporter _____ Company Name			U.S. EPA ID Number			
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit WT/Vol.	31. Waste Codes
32. Special Handling Instructions and Additional Information						
33. Transporter 3 Acknowledgment of Receipt of Materials Printed/Typed Name Signature Month Day Year						
34. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name Signature Month Day Year						
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 91970

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/15/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 503602 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895526JJK
Destination Grid
PO OR358045
Profile OR358045 (Drained PCB Transformer Carcass - NonTSCA: PCB10)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	16561 lb*
In	03/15/2024 09:33:40	MANUAL WT	pslider1		Tare	1 lb*
Out	03/15/2024 09:33:40		pslider1		Net	16560 lb
Comments			* Manual Weight		Tons	8.28

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 NonH Disp-Pounds-N	100	16560	lb	0.26	41.40	\$4305.60	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.96		\$461.46	WA-TUKWILA
3 WWM-WASTE WATER MA	100		%	4.75		\$204.52	WA-TUKWILA
4 RAIL EA-RAIL EA	100	1.00	Each	785.00		\$785.00	WA-TUKWILA
5 LINER EA-LINER PER	100	1.00	Each	75.00		\$75.00	WA-TUKWILA
6 RENT DAILY-RENT PE	100	37.00	Each	20.00		\$740.00	WA-TUKWILA
7 TRANS PER TRIP-TRA	100	1.00	Each	520.00		\$520.00	WA-TUKWILA

Total Tax	\$41.40
Total Ticket	\$7132.98

Driver`s Signature



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 21, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2312-252

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on December 20, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Baumeister', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2023
Samples Submitted: December 20, 2023
Laboratory Reference: 2312-252
Project: Star Forge

Case Narrative

Samples were collected on December 20, 2023 and received by the laboratory on December 20, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: December 21, 2023
 Samples Submitted: December 20, 2023
 Laboratory Reference: 2312-252
 Project: Star Forge

PCBs EPA 8082A

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Breaker Bar Wipe_122023						
Laboratory ID: 12-252-01						
Aroclor 1016	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1260	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1262	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-20-23	12-21-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 97 54-135</i>						

Client ID: Excavator Bucket Wipe_122023						
Laboratory ID: 12-252-02						
Aroclor 1016	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1260	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1262	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-20-23	12-21-23	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 97 54-135</i>						



Date of Report: December 21, 2023
 Samples Submitted: December 20, 2023
 Laboratory Reference: 2312-252
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1220P1					
Aroclor 1016	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1260	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1262	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-20-23	12-21-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	92	54-135				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1220P1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	20.4	20.4	20.0	20.0	N/A	102	102	74-124	0	15	
Surrogate:											
DCB						95	102	54-135			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com									
Company: DH Environmental									
Project Number:									
Project Name: Star Forge									
Project Manager: D. Hill									
Sampled by: D. Moxley									
☒ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☒ Best Available (other)									
Turnaround Request (in working days)									
Lab ID									
Sample Identification									
Date Sampled									
Time Sampled									
Matrix									
Number of Containers									
NWT PH-HCID									
NWT PH-Gx/BTEX (8021 ☐ 8260 ☐)									
NWT PH-Gx									
NWT PH-Dx (SG Clean-up ☐)									
Volatiles 8260									
Halogenated Volatiles 8260									
EDB EPA 8011 (Waters Only)									
Semivolatiles 8270/SIM (with low-level PAHs)									
PAHs 8270/SIM (low-level)									
PCBs 8082									
Organochlorine Pesticides 8081									
Organophosphorus Pesticides 8270/SIM									
Chlorinated Acid Herbicides 8151									
Total RCRA Metals									
Total MTCA Metals									
TCLP Metals									
HEM (oil and grease) 1664									
%									
Moisture									
Signature									
Company									
Date									
Time									
Comments/Special Instructions									
Relinquished									
Received									
Relinquished									
Received									
Relinquished									
Received									
Reviewed/Date									
Reviewed/Date									
Data Package: Standard ☒ Level III ☐ Level IV ☐									
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐									



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 28, 2023

David Hill
DH Environmental, Inc.
1011 SW Klickitat Way, Suite 107
Seattle, WA 98103

Re: Analytical Data for Project Star Forge
Laboratory Reference No. 2312-300

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on December 27, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 28, 2023
Samples Submitted: December 27, 2023
Laboratory Reference: 2312-300
Project: Star Forge

Case Narrative

Samples were collected on December 27, 2023 and received by the laboratory on December 27, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PCBs EPA 8082A Analysis

During sample extraction, the sample "Smooth bucket" was mistakenly spiked with the Aroclor 1260 spike solution. Because the laboratory only had one wipe sample, a re-extraction was not possible, and extraction of the spiked sample continued. With a theoretical 100% recovery, the spiked sample would have a concentration of 10 µg/100cm². After extraction, the spiked sample had a concentration of 9.3 µg/100cm² of Aroclor 1260 and showed no evidence of containing other Aroclors.

Considering that the Aroclor 1260 in the sample extract is of the same composition as our spike, and that the amount recovered is less than the theoretical recovery, it is highly likely that the wipe "Smooth bucket" does not contain any Aroclor 1260 above the concentration of 2.0 µg/100cm².

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: December 28, 2023
 Samples Submitted: December 27, 2023
 Laboratory Reference: 2312-300
 Project: Star Forge

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: W. Pwrhouse Vault Soil-2						
Laboratory ID: 12-300-01						
Aroclor 1016	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1221	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1232	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1242	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1248	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1254	0.14	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1260	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1262	ND	0.058	EPA 8082A	12-27-23	12-27-23	
Aroclor 1268	ND	0.058	EPA 8082A	12-27-23	12-27-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	76	50-127				



Date of Report: December 28, 2023
 Samples Submitted: December 27, 2023
 Laboratory Reference: 2312-300
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1227S1					
Aroclor 1016	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1221	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1232	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1242	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1248	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1254	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1260	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1262	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Aroclor 1268	ND	0.050	EPA 8082A	12-27-23	12-27-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	85	50-127				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1227S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.414	0.459	0.500	0.500	N/A	83	92	55-119	10	34
Surrogate:										
DCB						80	89	50-127		



Date of Report: December 28, 2023
 Samples Submitted: December 27, 2023
 Laboratory Reference: 2312-300
 Project: Star Forge

PCBs EPA 8082A

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Smooth Bucket					
Laboratory ID:	12-300-02					
Aroclor 1016	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1260	9.3	2.0	EPA 8082A	12-27-23	12-27-23	Z
Aroclor 1262	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	86	54-135				
Client ID:	Tooth Bucket					
Laboratory ID:	12-300-03					
Aroclor 1016	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1260	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1262	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	54-135				



Date of Report: December 28, 2023
 Samples Submitted: December 27, 2023
 Laboratory Reference: 2312-300
 Project: Star Forge

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Wipe
 Units: ug/100cm2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1227P1					
Aroclor 1016	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1221	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1232	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1242	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1248	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1254	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1260	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1262	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Aroclor 1268	ND	2.0	EPA 8082A	12-27-23	12-27-23	
Surrogate:	Percent Recovery	Control Limits				
DCB	89	54-135				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1227P1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	19.4	19.4	20.0	20.0	N/A	97	97	74-124	0	15
Surrogate:										
DCB						90	91	54-135		



Date of Report: December 28, 2023
Samples Submitted: December 27, 2023
Laboratory Reference: 2312-300
Project: Star Forge

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
W. Pwrhouse Vault Soil-2	12-300-01	13	12-27-23





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z - Sample was inadvertently spiked at 10 ug/100 cm² of Aroclor 1260. Please refer to the case narrative for this result.
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Turnaround Request
(in working days)

Chain of Custody

Page 1 of 1

Company: D4 Environmental					
Project Number:					
Project Name: STAR force					
Project Manager: D. Hill					
Sampled by: D. Jenkins					
(Check One) ☐ Same Day ☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)					
Fastest Available X _____ (other)					
Number of Containers					
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)					
NWTPH-Gx					
NWTPH-Dx (SG Clean-up ☐)					
Volatiles 8260					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level)					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
% Moisture					

Appendix G

Powerhouse Vault Excavation and Disposal Documentation



Powerhouse Vault Location Map

Former Jorgensen Forge Facility
8531 E. Marginal Way S.
Tukwila, WA, 98108

01/26/2024

Figure

1

Legend



Approximate Location of Powerhouse Vault

Note:

1. Aerial Photography Source:
Google Earth Pro, 08/14/2020.



0 60 120
Scale in Feet



Photo 1: Location of the vault, west of the Powerhouse, after initial discovery. The vault was hidden beneath a concrete structure, and beneath a steel plate supported by an I-beam. The main Powerhouse structure is visible in the background, view to the east southeast.



Photo 2: Powerhouse vault, west of the Powerhouse, after initial discovery. View to the south.



Photo 3: Powerhouse vault, west of the Powerhouse, after initial discovery. Initial waste characterization soil sample collected from the brown soil marked with a red arrow. View to the southwest.



Photo 4: Powerhouse vault, west of the Powerhouse, following soil removal from the portion of the vault extending east-west. The vault contains a concrete base and sidewalls. Soil was stockpiled on plastic pending profile approval as TSCA waste to a subtitle C landfill. View to the west.



Photo 5: Powerhouse vault, west of the Powerhouse, following soil removal from the portion of the vault extending east-west. View to the east.



Photo 6: Powerhouse vault, west of the Powerhouse, following soil removal from the portion of the vault extending east-west. The vault appears to end after the steel I-beam visible in the top portion of this picture, and the fill material distinctly changes to a very dense gravel. No concrete sidewall was present at the south end of the vault. View to the south.



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88345

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/31/2024 Vehicle# 2 Volume
Payment Type Credit Account Container
CWM Load# 502778 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 017543360JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	52821 lb*
In	01/31/2024 09:49:17	MANUAL WT	pslider1		Tare	1 lb*
Out	01/31/2024 09:49:17		pslider1		Net	52820 lb
Comments			* Manual Weight		Tons	26.41

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	26.41	Tons	175.00	528.20	\$4621.75	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.74		\$498.97	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$219.53	WA-TUKWILA
5 TRANS PER TON-TRAN	100	26.41	Tons	90.00		\$2376.90	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$528.20
Total Ticket	\$8430.35

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88344

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 01/31/2024 Vehicle# 7 Volume
Payment Type Credit Account Container
CWM Load# 502777 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 017543361JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

In	Time	Scale	Operator	Inbound	Gross	56821 lb*
01/31/2024 09:38:16		MANUAL WT	pslider1		Tare	1 lb*
Out	01/31/2024 09:38:16		pslider1		Net	56820 lb
			* Manual Weight		Tons	28.41

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	28.41	Tons	175.00	568.20	\$4971.75	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.74		\$535.82	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$236.16	WA-TUKWILA
5 TRANS PER TON-TRAN	100	28.41	Tons	90.00		\$2556.90	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$568.20
Total Ticket	\$9053.83

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 89757

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 02/23/2024 Vehicle# 7 Volume
Payment Type Credit Account Container
CWM Load# 503263 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895550JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

In	Time	Scale	Operator	Inbound	Gross	60281 lb*
02/23/2024	09:46:19	MANUAL WT	pslider1		Tare	1 lb*
Out	02/23/2024	09:46:19	pslider1		Net	60280 lb
			* Manual Weight		Tons	30.14

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	30.14	Tons	175.00	602.80	\$5274.50	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	7.22		\$608.11	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$250.54	WA-TUKWILA
5 TRANS PER TON-TRAN	100	30.14	Tons	90.00		\$2712.60	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$602.80
Total Ticket	\$9633.55

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 91782

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/13/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 503680 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895551JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	
In	03/13/2024 11:26:07	MANUAL WT	pslider1		Tare	34441 lb*
Out	03/13/2024 11:26:07		pslider1		Net	1 lb*
			* Manual Weight		Tons	34440 lb
Comments						17.22

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	17.22	Tons	175.00	344.40	\$3013.50	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.96		\$334.88	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$143.14	WA-TUKWILA
5 TRANS PER TON-TRAN	100	17.22	Tons	90.00		\$1549.80	WA-TUKWILA
6 LINER EA-LINER PER	100	1.00	Each	80.00		\$80.00	WA-TUKWILA

Total Tax	\$344.40
Total Ticket	\$5490.72

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 91783

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier WATCO PALUOSE & COULEE CITY
Ticket Date 03/13/2024 Vehicle# RAIL Volume
Payment Type Credit Account Container
CWM Load# 503777 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895552JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	35121 lb*
In	03/13/2024 11:32:22	MANUAL WT	pslider1		Tare	1 lb*
Out	03/13/2024 11:32:22		pslider1		Net	35120 lb
Comments			* Manual Weight		Tons	17.56

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	17.56	Tons	175.00	351.20	\$3073.00	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	6.96		\$341.34	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$145.97	WA-TUKWILA
5 TRANS PER TON-TRAN	100	17.56	Tons	90.00		\$1580.40	WA-TUKWILA
6 LINER EA-LINER PER	100	1.00	Each	80.00		\$80.00	WA-TUKWILA

Total Tax	\$351.20
Total Ticket	\$5596.91

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 89758

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 02/23/2024 Vehicle# 1 Volume
Payment Type Credit Account Container
CWM Load# 503264 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895553JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

In	Time	Scale	Operator	Inbound	Gross	60681 lb*
02/23/2024	09:50:58	MANUAL WT	pslider1		Tare	1 lb*
Out	02/23/2024	09:50:58	pslider1		Net	60680 lb
			* Manual Weight		Tons	30.34

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	30.34	Tons	175.00	606.80	\$5309.50	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	7.22		\$612.06	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$252.20	WA-TUKWILA
5 TRANS PER TON-TRAN	100	30.34	Tons	90.00		\$2730.60	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$606.80
Total Ticket	\$9696.16

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88980

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 02/15/2024 Vehicle# R72 Volume
Payment Type Credit Account Container
CWM Load# 502979 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895556JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

In	Time	Scale	Operator	Inbound	Gross	64941 lb*
02/15/2024	15:45:19	MANUAL WT	pslider1		Tare	1 lb*
Out	02/15/2024	15:45:19	pslider1		Net	64940 lb
			* Manual Weight		Tons	32.47

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	32.47	Tons	175.00	649.40	\$5682.25	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	7.24		\$655.90	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$269.91	WA-TUKWILA
5 TRANS PER TON-TRAN	100	32.47	Tons	90.00		\$2922.30	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$649.40
Total Ticket	\$10364.76

Driver`s Signature



Chemical Waste Management of the NorthWest
17629 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2643

Reprint
Ticket# 88973

Customer Name CONSTRUCTION GROUP INTERNATIO Carrier RTRANSPORT R Transport Inc
Ticket Date 02/15/2024 Vehicle# R86 Volume
Payment Type Credit Account Container
CWM Load# 502972 Driver
Hauling Ticket# Check#
Route Billing # 0000255
State Waste Code Gen EPA ID
Manifest 025895557JJK
Destination Grid
PO OR357930
Profile OR357930 (PCB IMPACTED SOIL: PCB01)
Generator 133-STAR FORGE LLC 8531 E MARG STAR FORGE LLC 8531 E MARGINAL WAY S TUKWILA

	Time	Scale	Operator	Inbound	Gross	57601 lb*
In	02/15/2024 12:32:33	MANUAL WT	pslider1		Tare	1 lb*
Out	02/15/2024 12:32:33		pslider1		Net	57600 lb
Comments			* Manual Weight		Tons	28.80

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 TSCA Disp-Tons-TSC	100	28.80	Tons	175.00	576.00	\$5040.00	WA-TUKWILA
2 ENERGY-Energy Surc	100		%	7.24		\$583.28	WA-TUKWILA
3 MFE-e-Manifest (La	100	1.00	Each	25.00		\$25.00	WA-TUKWILA
4 WWM-WASTE WATER MA	100		%	4.75		\$239.40	WA-TUKWILA
5 TRANS PER TON-TRAN	100	28.80	Tons	90.00		\$2592.00	WA-TUKWILA
6 LINER EA-LINER PER	100	2.00	Each	80.00		\$160.00	WA-TUKWILA

Total Tax	\$576.00
Total Ticket	\$9215.68

Driver`s Signature

Appendix H

Stormwater Engineer Certification Letter

April 1, 2024

Subject: Jorgensen Forge
Engineer Certification Letter

The project site is located at the former Jorgensen Forge site at 8531 E Marginal Way in the City of Tukwila, Washington. PACLAND performed a site visit to the project site on March 15, 2024 to evaluate the condition of the existing site after demolition of buildings and stabilization of the disturbed areas, which consisted of paving/grading operations to direct stormwater runoff to existing storm drainage infrastructure.

Based on site observations and information provided by the contractor on-site, the re-grading operations appear to be functioning as intended, with stormwater runoff on the pad being directed toward existing stormwater infrastructure to the maximum extent feasible. No ponding was observed on the former building pad area.

Per a letter provided by DH Environmental Inc. on March 27, 2024, the existing storm drainage system "was cleaned via jet rodding and pressure washing to the extent possible utilizing industry standard equipment. All waste was collected and will be designated and disposed of in accordance with WAC 173-303." Per the site contractor, all structural temporary erosion and sediment control (TESC) measures (silt fences, catch basin inserts, etc.) have been removed from the site.

Based on the site observations, removal of TESC measures, and cleaning of the existing infrastructure, it is our opinion that the storm drainage system is functioning properly.

If you have questions regarding the above letter, please feel free to contact us at (206) 522-9510 or via email at lrandles@pacland.com.

Sincerely,



Luke Randles, P.E.



04/01/2024

Appendix I

Administrative Order Docket Number 22970



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

July 25, 2024

James Robertson
Star Forge LLC, dba Jorgensen Forge
8531 E. Marginal Way S.
Tukwila, WA 98108

Re: Administrative Order

Administrative Order Docket #	22970
Site Location	Jorgensen Forge (former) 8531 E. Marginal Way S. Tukwila, WA 98108

Dear James Robertson:

The Department of Ecology (Ecology) is issuing the enclosed Administrative Order (Order) requiring Star Forge LLC, dba Jorgensen Forge to comply with:

- Chapter 90.48 Revised Code of Washington (RCW) - State of Washington Water Pollution Control Act.
- Chapter 173-201A Washington Administrative Code (WAC) - Water Quality Standards for Surface Waters of the State of Washington.

If you have questions, please contact Jessica Kasmari at Jessica.kasmari@ecy.wa.gov or 425-758-3799.

Sincerely,

Rachel McCrea
Water Quality Section Manager
Northwest Region Office

Enclosure: Administrative Order Docket #22970

By Certified Mail #9171 9690 0935 0233 1459 40

Administrative Order #22970

James Robertson

Page 2

ecc: Amy Jankowiak, Ecology
 Jessica Kasmari, Ecology
 Stacy Fox, DH Environmental, Inc.
 David Hill, DH Environmental, Inc.

State of Washington
Department of Ecology

In the Matter of an Administrative Order Against
STAR FORGE LLC, DBA JORGENSEN FORGE
JAMES ROBERTSON
Administrative Order Docket #22970

To: James Robertson
Star Forge LLC, dba Jorgensen Forge
8531 E. Marginal Way S.
Tukwila, WA 98108

Administrative Order Docket #	22970
Site Location	Jorgensen Forge (former) 8531 E. Marginal Way S. Tukwila, WA 98108

The Department of Ecology (Ecology) has issued this Administrative Order (Order) requiring Star Forge LLC, dba Jorgensen Forge to comply with:

- Chapter 90.48 Revised Code of Washington (RCW) - State of Washington Water Pollution Control Act.
- Chapter 173-201A Washington Administrative Code (WAC) - Water Quality Standards for Surface Waters of the State of Washington.

Chapter 90.48.120(2) RCW gives Ecology the authority to issue Administrative Orders requiring compliance whenever it determines that immediate action is necessary to accomplish the purposes of Chapter 90.48 RCW.

1. Order to Comply

Ecology's determination that immediate action is necessary to accomplish the purposes of Chapter 90.48 RCW is based on the information listed below.

Star Forge LLC, dba Jorgensen Forge (Star Forge) previously operated the facility at 8531 E. Marginal Way S. and was conditionally authorized to discharge stormwater associated with industrial activity under Industrial Stormwater General Permit (ISGP) #WAR003231 (Permit). The site has undergone demolition, and all industrial equipment has been removed. Star Forge applied for and received Notice of Termination of the Permit on June 10, 2024.

The prior owner of the facility, Jorgensen Forge Corporation, filed for bankruptcy in 2016. The facility was subsequently purchased by Star Forge, LLC and Star Forge continued to operate the facility under the name Jorgensen Forge. The past operations occurred in one large building (main building) with a footprint of approximately 283,000 square feet (8.03 acres). The main

building included the Melt Shop, Forge Shop, Heat Treat, Hollowbore, and Machine Shops. There were also several smaller buildings that housed an office, support services, storage, and an aluminum heat-treat facility. The buildings were demolished after obtaining a demolition permit from the City of Tukwila. Most of the property is paved with concrete or asphalt. The stormwater treatment system remains and discharges to the Duwamish River via outfall 3.

Ecology issued Administrative Order #18074 on April 9, 2020 and Amended Administrative Order #18160 on July 20, 2020 (collectively, the “2020 Order”) related to contamination on site (soil and groundwater) requiring the collection of stormwater, treatment, monitoring and reporting prior to discharge to the Lower Duwamish Waterway, a Superfund cleanup site.

Water quality violations prior to April 2020, under the Permit showed elevated levels of PCBs, zinc, copper, petroleum hydrocarbons, turbidity, and pH. The Permit did not have water quality sampling requirements or benchmarks for all known constituents of concerns on-site, such as PCBs, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, zinc, gasoline-range hydrocarbons, diesel and oil-range hydrocarbons, and BTEX. The 2020 Order required the collection of all contaminated stormwater to go to a treatment system that could ensure indicator levels set by the 2020 Order would be met prior to batch discharge. The indicator levels were set to assure that water quality standards would be met for the known contaminants. The 2020 Order also required monitoring and reporting of monitoring data as well as notification of indicator level exceedances.

Star Forge has ceased all industrial activity and has completed demolition of the buildings on the site. Due to the presence of contamination in the soil and groundwater, Star Forge plans to keep the treatment system on site and operating until the site is sold to a new owner. This Order terminates and replaces the 2020 Order but continues the 2020 Order requirements for collection, treatment, monitoring and reporting separate from the terminated Permit. Batch treatment is no longer necessary as the site has shown that the treatment regularly meets indicator levels.

In order to comply with the Water Quality Standards for discharges to surface waters of the State of Washington, and to comply with Chapter 90.48 RCW, this Order continues to require collection of contaminated stormwater, treatment to indicator levels, monitoring, and reporting. Ecology used updated indicator levels consistent with current standards and included parameters that were in the Permit but not the Order including Zinc, Copper, Lead, Diesel and oil-range hydrocarbons, turbidity, and pH.

Corrective Actions Required:

For these reasons and in accordance with RCW 90.48.120(2), it is ordered that Star Forge LLC take the following actions. These actions are required at the location formerly known as Jorgensen Forge at 8531 E. Marginal Way S, Tukwila, WA.

1. Capture, contain, and treat all contaminated stormwater prior to discharge to the receiving waterbody.
2. Use the existing Ecology-approved treatment system and media filtration to treat any contaminated stormwater. Ecology must be notified in advance if any changes in the treatment are made, with the exception of routine maintenance.
3. All captured solids from the treatment of the contaminated stormwater must be transported to an approved disposal facility based on the level of contamination.
4. Star Forge may use a flow-through treatment system. All contaminated stormwater must be sampled monthly while discharging and tested for the parameters listed in Table 1.
5. If any of the Indicator Levels listed in Table 1 are exceeded, Star Forge must stop the discharge of contaminated stormwater to the receiving waterbody until it has been retested to determine that all parameters are equal to or below the Indicator Levels in Table 1. If any of the Indicator Levels are exceeded after being retested, Star Forge must modify the existing flow-through treatment system to increase its effectiveness, install an additional Ecology-approved treatment system, or truck the contaminated stormwater off-site for disposal in an approved manner. Star Forge may also discharge the treated water to sanitary sewer in accordance with the conditions of the discharge authorization from the proper sewer authority.
6. Sampling results for the contaminants listed in Table 1 must be reported by email to the lead Duwamish Inspector (as listed in the contact information in section 4 of this Order). Results of monthly sampling must be submitted quarterly (due April 15 for the first quarter; July 15; October 15; and January 15 of each year). If sampling is conducted more frequently than required by this Order, the results of this monitoring must be included. If sampling is not conducted for one or more months in a quarter, include a description of why no sample was collected and/or analyzed.
7. Any discharge to Waters of the State in exceedance of the Indicator Levels in Table 1 must be reported to the Department of Ecology as follows:
 - a. Immediately notify Ecology by calling the regional 24-hour Environmental Report Tracking System (ERTS) phone number (206) 594-0000.
 - b. Cease the discharge until Indicator Levels can be met.
8. If a modification of this Order is desired, a written request must be submitted to Ecology and if approved, Ecology will issue an amendment to this Order. Ecology retains the right to make modifications to this Order through supplemental Order, or amendment to this Order, if it appears necessary to further protect water quality.

Table 1. Marine/Brackish Water Parameters

Star Forge must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table for monitoring unless the method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136. If Star Forge uses an alternative method, not specified in the order and as allowed above, it must report the test method, DL, and QL to Ecology.

Pollutant & CAS No. (if available)	Sampling Frequency*	Sample Type	Indicator Level, µg/L unless otherwise noted	Required Analytical Protocol	Detection Level, µg/L unless otherwise noted	Quantitation Level, µg/L unless otherwise noted
PETROLEUM HYDROCARBONS						
BTEX (benzene, toluene, ethylbenzene and O,M,P xylenes)	Monthly	Grab	2.0 ^a	SW 846 8021/ 8260	1.0	2.0
Diesel and Oil-Range Hydrocarbons (NWTPH-Dx) ^b	Monthly	Grab	250 ^a	NWTPH-Dx	250	250
Gasoline-Range Hydrocarbons (NWTPH-Gx) ^c	Monthly	Grab	250 ^a	NWTPH-Gx	250	250
METALS						
Arsenic, Total (7440-38-2)	Monthly	Grab	69 ^d	200.8	0.1	0.5
Barium, Total (7440-39-3)	Monthly	Grab	1,000 ⁱ	200.8	0.5	2.0
Cadmium, Total (7440-43-9)	Monthly	Grab	42.25 ^d	200.8	0.05	0.25
Chromium, Total (7440-47-3)	Monthly	Grab	1100 ^h	200.8	0.2	1.0
Copper, Total (7440-50-8)	Monthly	Grab	5.78 ^d	200.8	0.4	2.0
Lead, Total (7439-92-1)	Monthly	Grab	220.82 ^d	200.8	0.1	0.5
Mercury, Total (7439-97-6)	Monthly	Grab	2118 ng/L ^d	1631E	0.2 ng/L	0.5 ng/L
Nickel, Total (7440-02-0)	Monthly	Grab	74.75 ^d	200.8	0.1	0.5
Selenium, Total (7782-49-2)	Monthly	Grab	290.58 ^d	200.8	1.0	1.0
Silver, Total (7440-22-4)	Monthly	Grab	2.24 ^d	200.8	0.04	0.2
Zinc, Total (7440-66-6)	Monthly	Grab	95.14 ^d	200.8	0.5	2.5
POLYCHLORINATED BIPHENYLS (PCBs)						
PCBs, Total ^f (8082A)	Monthly	Grab	0.016 ^g	8082A (Update V)	0.016 ^g	0.016 ^g

Pollutant & CAS No. (if available)	Sampling Frequency*	Sample Type	Indicator Level, µg/L unless otherwise noted	Required Analytical Protocol	Detection Level, µg/L unless otherwise noted	Quantitation Level, µg/L unless otherwise noted
TURBIDITY AND pH						
Turbidity	Monthly	Grab	25 NTU		SM2130 ^k	
pH	Monthly	Grab	6.5 - 8.5 SU		SM4500-H ⁺ B	

NOTES:

a	No applicable surface water criterion; value is laboratory quantitation level.					
b	NWTPH-Dx = Northwest Total Petroleum Hydrocarbons – Semi-volatile (“diesel”) for diesel range organics and heavy oils (includes jet fuels, kerosene, diesel-oils, hydraulic fluids, mineral oils, lubricating oils, and fuel oils).					
c	NWTPH-Gx = Northwest Total Petroleum Hydrocarbons – Volatile petroleum products including aviation and automotive gasolines, mineral spirits, Stoddard solvent, and naphtha.					
d	Acute – Marine Water Toxic Substances Criteria (WAC 173-201A-240) calculated using conversion factors per Table 240.					
e	Or equivalent.					
f	Total PCBs are the sum of all congener or all isomer or homolog or Aroclor analyses.					
g	Value is the Lowest Level of Quantitation (LLOQ) for water samples for PCBs by Method 8082A, Update V.					
h	Indicator Level total chromium is actually for hexavalent chromium using Acute – Marine Water Toxic Substances Criteria (WAC 173-201A-240) because there is no water quality standard for total chromium.					
i	Applicable surface water criterion does not exist for barium. The indicator level of 1,000 µg/L for barium is based on groundwater quality standards to be protective of human health and the environment.					
*	Sampling frequency is a minimum of monthly.					

2. Failure to Comply With This Order

Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

3. Your Right to Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within thirty (30) days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B0.001(2).

To appeal, you must do all of the following within thirty (30) days of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see address below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology by mail, in person or by email (see addresses below).

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Filing with the PCHB

For the most current information regarding filing with the PCHB, visit: <https://eluh0.wa.gov/> or call: 360-664-9160.

Service on Ecology

Street Addresses:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

4. Contact Information

Please direct all questions about this Order to:

Jessica Kasmari
Department of Ecology
Northwest Region Office
P.O. Box 330316
Shoreline, WA 98133-9716

Phone: 425-758-3799
Email: Jessica.kasmari@ecy.wa.gov

5. More Information

- **Pollution Control Hearings Board Website:**
<https://www.eluho.wa.gov>
- **Chapter 43.21B RCW – Environmental and Land Use Hearings Office – Pollution Control Hearings Board:**
<https://app.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<https://app.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**
<https://app.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Ecology's Laws, Rules, & Rulemaking Website**
<https://ecology.wa.gov/Footer/rulemaking>

6. Signature



Rachel McCrea
Water Quality Section Manager
Northwest Region Office

July 25, 2025
Date

Appendix J

Cultural Resources Monitoring Report Stell Environmental Enterprises, July 2024

CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: 2019-10-08126

Author: Nichole Padovano, BA and Anne B. Parfitt, MA

Title of Report: FINAL: Star Forge Facility Demolition Project Cultural Resources Monitoring Report

Date of Report: July 16, 2024

County(ies): King Section: 33 Township: 23, 24 Range: 4E

Quad: Seattle North Acres: 20.2

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐ Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

DAHP Archaeological Site #:

HPI 720357

HPI 720359

HPI 720360

FINAL: STAR FORGE FACILITY DEMOLITION PROJECT CULTURAL RESOURCES MONITORING REPORT

King County, Washington



July 29, 2024

Prepared for:

DH Environmental, Inc.
1011 SW Klickitat Way #107
Seattle, WA 98134

Contract No.: 06222023
Task Order No.: WO-SF-01

Prepared by:



Stell
6100 219th St. SW Suite 480
Mountlake Terrace, WA 98043

By: Nichole Padovano, BA., Anne B. Parfitt, MA

DAHP Project No.: 2019-10-08126
Stell Project No.: DHE001.01

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APPENDICES

Appendix A: Monitoring and Inadvertent Discovery Plan (MIDP)

Appendix B: Daily Monitoring Logs

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
BP	Before Present
DAHP	Washington Department of Archaeology and Historic Preservation
DH	DH Environmental, Inc
ft.	foot/feet
GLO	United States Department of the Interior, Bureau of Land Management, Government Land Office
km	kilometer(s)
m	meter(s)
MIDP	Monitoring and Inadvertent Discovery Plan
N/A	Not Applicable/Not Available
No.	Number
NRHP	National Register of Historic Places
NT	North Tank Vault System
Project, the	Star Forge Facility Demolition Project
SEPA	State Environmental Policy Act
SS	Soil Sample
ST	South Tank Vault System
Star Forge	Star Forge, LLC
Stell	Stell Environmental Enterprises, Inc.
UST	Underground Storage Tank
WA	Washington
WISAARD	Washington Information System for Architectural and Archaeological Records Data

EXECUTIVE SUMMARY

Stell Environmental Enterprises, Inc. was contracted by DH Environmental, Inc. to conduct cultural resources monitoring for the Star Forge Facility Demolition Project (the Project), located at 8531 East Marginal Way South in Tukwila, Washington. The area of potential effect (APE) is 8.2 hectares (20.2 acres), on the right (eastern) bank of the Lower Duwamish Waterway, about 6.4 kilometers (4 miles) upstream from the mouth of the Duwamish River. The APE is located within an area designated as very highly likely to yield cultural materials by the Washington State Department of Archaeology and Historic Places predictive model. The **Department of Archaeology and Historic Preservation Project Number is 2019-10-08126**. A literature review of the Washington Information System for Architectural and Archaeological Records Data, as well as other cultural and environmental documents, revealed that a total of 27 cultural resource surveys, 10 archaeological sites, 2 cemeteries, 5 registered historic properties, and 1,504 structures have been previously recorded within 1.6 kilometers (1 mile) of the APE. No archaeological sites were identified within the APE. A Monitoring and Inadvertent Discovery Plan was developed and followed for this Project by Stell's Geri Knight-Iske(**Appendix A**). Archaeological monitoring was conducted on August 21, 22, 24, 28–30, and October 11 and 24, 2023 for eight days over two months.

This report is a summary of monitoring activities for the Star Forge Facility Demolition Project. No significant cultural resources were discovered during monitoring.

1. INTRODUCTION

1.1 PROJECT INFORMATION

The Washington State Department of Ecology negotiated a legal Agreed Order with Star Forge LLC (Star Forge) to conduct an early cleanup and demolition of the Star Forge Facility, which is a private parcel located at 8531 East Marginal Way South in Tukwila, Washington (WA) (the Project). DH Environmental, Inc. (DH) was contracted to conduct the remediation and demolition of the existing structures on the Star Forge facility. The Project included the removal of 18 underground storage tanks (USTs); decontamination and/or removal of concrete and asphalt slabs at the site's Dangerous Waste Management Units; demolition of all site buildings; and removal of necessary soil to facilitate paving. Stell Environmental Enterprises, Inc. (Stell) was subcontracted by DH to conduct the cultural resources monitoring for the Project in compliance with the State Environmental Policy Act (SEPA). See **Appendix A** for the Monitoring and Inadvertent Discovery Plan (MIDP). The Department of Archaeology and Historic Places (DAHP) Project Number (No.) is 2019-10-08126.

1.2 PROJECT LOCATION

The area of potential effect (APE) is in Tukwila, WA on the right (eastern) bank of the Duwamish River, approximately 6.4 kilometers (km) (4 miles) upstream from the mouth of the Duwamish River, in Section 33 of Township 23 and 24 North, Range 4 East, Willamette Meridian (**Figure 1-1** and **Figure 1-2**). The Project is in Parcel No. 000160-0023, King County, Washington. The total acreage of the APE is 8.2 hectares (20.2 acres). The APE is located within an area designated as very highly likely to yield cultural materials by the DAHP predictive model.

1.3 PROJECT BACKGROUND

The Duwamish River and adjacent upland areas have served as Seattle's major water-dependent industrial corridor since the river was created by widening and straightening much of the Duwamish River in the early 1900s. The Duwamish River flows north through Tukwila and Seattle, splitting at the southern end of Harbor Island to form the East and West Waterways, which discharge into Elliott Bay in Seattle, WA.

1.4 REGULATORY ENVIRONMENT

This project is subject to SEPA, which mirrors the National Environmental Policy Act. SEPA requires that all major actions sponsored, funded, permitted, or approved by Washington State and/or local agencies consider the impacts of the planned action on the environment and properties of historical, archaeological, scientific, or cultural importance (Washington Administrative Code 197-11-960), especially those that are or could be listed on the National Register of Historic Places (NRHP) or other historic registers, including the Washington Heritage Register or King County Landmarks. The DAHP is the lead agency for considering the effects of a proposed action on cultural resources and provides formal recommendations to local governments and other Washington State agencies for appropriate treatments or actions.

Historic properties that could be eligible for the NRHP include any artifacts, records, and remains that are related to such a district, site, building, structure, or object (16 United States Code 470[5]). The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association.

They also:

- are associated with events that have contributed to the broad pattern of our history;
- are associated with the lives of people significant in our past;
- embody the distinct characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded, or are likely to yield, information important for understanding prehistory or history (36 Code of Federal Regulations 60.4).

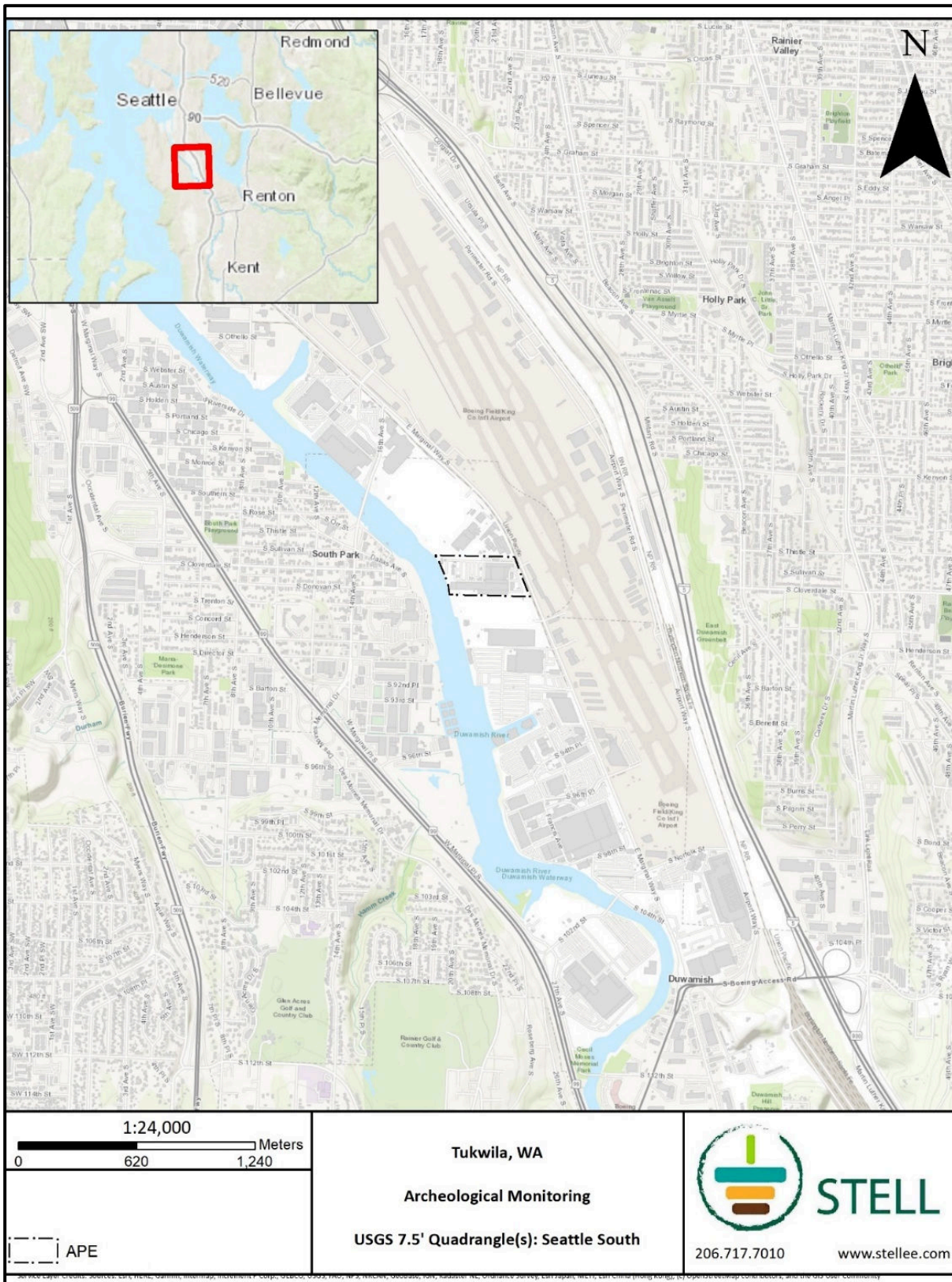


Figure 1-1. APE project vicinity map

**Figure 1-2. Star forge facility demolition project area**

2. ENVIRONMENT AND CULTURAL SETTING

This section describes the environmental and cultural context of the APE. Elements of the environmental context include geology, soils, and plant and animal habitats. Knowledge of the geologic processes associated with the landforms in this area can assist in locating archaeological resources. Geographic features like shorelines, rivers, lakes, and terraces are often correlated with the archaeological record. These locations provided abundant plant resources and fish throughout prehistory and often attracted terrestrial animals. As a result, sites tend to be found along shorelines, within active floodplains, or along associated terraces. The depth of soils and potential for buried deposits can be derived from soil surveys and geomorphologic descriptions of the landscape. Understanding the extent of native plant and ecological habitats provides a context for interpreting archaeological sites and activity locations.

2.1 ENVIRONMENTAL CONTEXT

Environmental data for the APE was gathered from geologic and soil maps and reports of recent geological and geomorphological investigations describing subsurface conditions and the post-depositional processes that may have impacted the APE's cultural deposits.

2.1.1 PHYSIOGRAPHIC PROVINCE

The Project is within the Puget Sound Area of the western hemlock (*Tsuga heterophylla*) vegetation zone within the Puget-Willamette Lowland physiographic province (Franklin and Dyrness 1988). The Western Hemlock Zone is western Washington and Oregon's most extensive vegetation zone (Franklin and Dyrness 1988). It extends from British Columbia through the Olympic Peninsula, Coast Ranges, Puget Trough, and both Cascade physiographic provinces in western Washington (Franklin and Dyrness 1988). Major forest tree species in this zone are Douglas-fir (*Pseudotsuga menziesii*), western hemlock, and western red cedar (*Thuja plicata*). Less common conifers include grand fir (*Abies grandis*), Sitka spruce (*Picea sitchensis*), and western white pine (*Pinus monticola*). Western white pine and lodgepole pine (*Pinus contorta*) are common on glacial drift in the Puget Sound area. The APE presently contains standing structures, asphalt, manicured garden areas, and lawns.

2.1.2 GEOMORPHOLOGY

The Project is in the southern Puget Lowlands. The Puget Lowlands are a north-south-trending geological and physiographic province bordered by the Cascade Mountains on the east and the Olympic Mountains on the west (Franklin and Dyrness 1988; Troost and Stein 1995). It was shaped by at least four periods of extensive glaciation during the Pleistocene epoch (Easterbrook 2003; Lasmanis 1991). The bedrock was depressed and deeply scoured by glaciers, and sediments were deposited and often reworked as the glaciers advanced and retreated. This can be seen in the area's overall rolling, low-relief topography that is deeply incised by large troughs/ravines. The elevation of the area is 152 meters (m) (500 feet [ft.]) above mean sea level (Troost and Stein 1995). The scoured troughs left by the glaciers are currently occupied by the Puget Sound and freshwater lakes, such as Lake Washington and Lake Sammamish (Galster and Laprade 1991; Liesch et al. 1963; Yount et al. 1993).

A mantle of glacial drift and outwash deposits were left across much of the Puget Lowland at the end of the Fraser Glaciation (the last of the four glacial periods) (Booth et al. 2003; Easterbrook 2003). The Vashon Stade of the Fraser Glaciation began around 18,000 years before present (BP) with an advance of the Cordilleran Ice Sheet into the lowlands (Porter and Swanson 1998). The

Puget Lobe rapidly advanced into the Puget Lowland and reached its maximum extent near what is now the town of Centralia by about 15,000 BP. The glacier remained this way for approximately 1,000 years until the ice began to retreat. The retreating Puget Lobe reached Seattle at about 13,600 BP (Borden and Troost 2001; Porter and Swanson 1998). The Puget Lobe was thicker towards the north and thinned towards its terminus in the south.

The APE is within the Geologic unit Quaternary alluvium, indicating alluvium ranging from a few meters to 30 m deep (United States Geological Survey 2005). The Duwamish River is part of the greater Duwamish-Green River system, within a glacial trough formed by melting and incision beneath the Puget Lobe (Montgomery et al. 2003). This river system and other sub-glacial river systems in the region aggraded throughout the Holocene and developed long, meandering channels running through what were often far-reaching wetland environments (Montgomery and Wohl 2004). The Duwamish-Green River delta reached its present position via repeated lahar events deriving from Mount Rainier, which helped shape and provide delta expansion material over the past 5,700 years (Dragovich et al. 1994). A lahar is a sediment-laden debris and/or mudflow that originates from the flanks of a volcano (Smith and Lowe 1991). The largest of these events was the Osceola mudflow. Approximately 5,700 years ago, it flowed from the summit and northeastern flank of Mount Rainier down the White River drainage into the Green and Puyallup River drainages, covering a total area of 314 km (121 square miles) (Dragovich et al. 1994). This lahar event, and subsequent, smaller lahar events, extended the Puyallup and Duwamish River deltas out into the marine embayments for these rivers and provided material for future delta advancement as the rivers downcut into the lahar material and deposited the sediment further downstream (Dragovich et al. 1994). Today, the sea level is approximately 1.5 m (5 ft.) higher than it was 5,700 years ago when the Duwamish deltas first began protruding into its current location, resulting in a slight increase in the elevation of the lower Duwamish floodplain (Steinkraus and Hodges 2018). In the 1800s, the Duwamish delta exhibited a complicated series of streams and channels extending across it (Collins and Sheikh 2005).

2.1.3 PALEOECOLOGY

Pollen samples collected through lake and wetland coring throughout the Puget Sound area suggest that paleoecology varied over time (Tsukada 1982; Whitlock 1992). Lodgepole pine, bracken fern (*Pteridium aquilinum*), and red alder (*Alnus rubra*) were the first to populate the landscape after the glaciers receded. These were followed by Douglas-Fir a few centuries later (Barnosky 1985).

At the beginning of the Holocene (10,000 BP–present), the climate continued to warm, and grasslands as well as oak (*Quercus* sp.) and hazel (*Corylus* sp.) woodlands established themselves on the landscape between 10,000 and 5000 BP. Douglas-fir became the dominant tree species in the area. At this time, precipitation became more seasonal, and summers saw increased droughts, fire frequency, and expanding prairies. Cedar (*Thuja* sp.) and Hemlock (*Tsuga* sp.) populations increased between 7000 and 5000 BP as canopy forests dominated the landscape and weather conditions became cool and moist (Tsukada 1982; Whitlock 1992). Since then, the climate has remained stable with small fluctuations between warmer/drier and cooler/moister conditions (Leopold et al. 1982).

2.1.4 SOILS

As defined by the United States Department of Agriculture soil survey, the soils within the APE comprise urban land and water. The urban land comprises all the soils surrounding the APE. No

subsurface characteristics are defined for these soils (United States Department of Agriculture 2021).

2.2 CULTURAL CONTEXT

This section describes the cultural context of the APE, which will inform the evaluation of findings from future field investigations performed as part of this Project. Elements of the cultural context include cultural chronologies developed for the pre-contact occupation through archaeological research, information derived from oral histories, and documented historic events and land use patterns. Reviewing archival archaeological, historical, and ethnographic documents provides insight toward developing hypotheses and a research design. The completion of this section included reviewing information from the DAHP; the Washington State Archives; the Department of the Interior, Bureau of Land Management, General Land Office (GLO) records; King County records; the University of Washington Libraries; and multiple historic imagery sources.

2.2.1 ARCHAEOLOGICAL CONTEXT

The first human occupation of western Washington may date back to approximately 14,000 BP, as evidenced at the Manis Mastodon site in Sequim, where a bone point and the spirally fractured bones of a mastodon suggest possible human hunting and butchering (Gustafson et al. 1979; Waters et al. 2011). Artifacts of the Clovis period, which began between 13,500 and 13,000 BP elsewhere in North America, have been found in isolated locales in southern and central Puget Sound. However, no occupation sites of this period have been found in Washington. The Richey Roberts site, a cache of Clovis blades, is the sole in-situ discovery of Clovis archaeology in Washington (Gramly 1991; Mehringer 1985). Several similar early sites in the region that coeval and predate Clovis are presented in recent literature (Huckleberry et al. 2003). While archaeologists have traditionally assumed that Clovis peoples focused heavily on big game for subsistence, there is increasing evidence that Clovis groups also relied on plants and smaller animals and had considerable dietary variability across North America (Cannon and Meltzer 2004).

As early as 9000 BP, as the climate stabilized, cultural complexes with distinct lithic technological assemblages emerged in the region (Carlson 1990; Fladmark 1979). These assemblages demonstrate a “foraging” economy based on generalized resource procurement for immediate consumption and high-residential group mobility (Ames 1981; Binford 1978). One of these distinct technologies is the Old Cordilleran Tradition (Butler 1961). In western Washington, the Old Cordilleran Tradition manifestations are recognized by unifacial pebble and cobble tools and chopper-like cores.

Other contemporary technologies include the Northwest Coast Microblade Tradition, identified by a diverse assemblage that includes microblade and microblade cores, leaf-shaped bifaces, and bifacial cores (Borden 1975; Fladmark 1979). The various technologies in the archaeological record suggest establishing multiple well-defined cultural groups populating the Northwest Coast vicinity early in prehistory. The post-Clovis prehistory of Western Washington is commonly divided into three cultural periods—Early, Middle, and Late—defined by a series of technological characteristics found at archaeological sites.

2.2.1.1 EARLY PERIOD

The Early period, which lasted from 12,000 to 7000 BP, is classified archaeologically by the Old Cordilleran Tradition (Matson and Coupland 1995), with regional manifestations defined as the Olcott Complex in the Puget Sound and the western Cascade Range regions and the Cascade Phase

east of the Cascade Range. Sites of this period in western Washington typically occur on high marine and river terraces, sometimes at significant distances from modern watercourses; they consist of concentrations of cobble cores; flakes; large, ovate knives; and broad-stemmed and leaf-shaped projectile points (Wessen 1990). These people are thought to have relied more on inland hunting than on fishing and shellfish procurement for subsistence. However, finds along the British Columbia coast indicate aquatic resources were sometimes important (Blukis Onat 1987).

2.2.1.2 MIDDLE PERIOD

The Middle period, lasting from 7000 to 4500 BP, incorporates a continuation of the Old Cordilleran Tradition and the emergence of a distinct Northwest Coastal culture; however, few sites in Washington can be attributed to this time interval (Blukis Onat et al. 2001; Morgan 1999). Toward the end of this period, as sea levels stabilized, the focus of subsistence activity seems to have changed from reliance on terrestrial to marine resources. Most sites appear along the coasts or major river systems. It is thought that this adaptation may have occurred earlier in the Gulf of Georgia and Fraser Valley regions of Canada (Stein 2000).

Archaeological sites associated with this cultural period are found to be technologically more complex and more diverse. They often include tools, bone and antler ornaments, and flaked stone. In the Puget Sound and western Washington, the Middle period is a transitional time represented archaeologically by a shift toward marine resource utilization (Morgan 1999).

2.2.1.3 LATE PERIOD

Human lifeways changed radically in the Late period (4500 to 250 BP) as people focused even more strongly on marine resources. During this time, the number and diversity of sites markedly increased (Matson and Coupland 1995). People maintained permanent villages on the coast and along the lower reaches of inland rivers. They used these as home bases and storage warehouses for fish, shellfish, game, and plant foods systematically amassed during the warm seasons (Matson and Coupland 1995). Cemeteries and petroglyph sites are often associated with significant places such as villages and seasonal habitation areas. Petroglyphs also occur occasionally in higher montane settings. Blazed cedars, stripped of bark for basketry or with planks removed from their living trunks, can still be found throughout the region. Seasonal habitation areas and task-specific locations have been documented in the lowlands and up into the subalpine zone of the mountains. However, they usually remain close to larger, permanent sources of water. These places are typically concentrated along trade routes that link communities living on both sides of the Cascade Mountains.

2.2.2 ETHNOGRAPHIC BACKGROUND

Prior to the arrival of Europeans, the Northwest Coast was one of the world's most densely populated nonagricultural areas. Between the mid-1700s and late 1800s, numerous outbreaks of infectious diseases, including smallpox and measles, decimated the population of the Northwest coast (Boyd 1990). Despite the massive reduction of the local population, when the first Euromerican settlers arrived at Alki Point in 1851, at least 17 Duwamish villages, including over 90 longhouses, were present along Elliott Bay and local river systems (Duwamish Tribe 2008).

The Duwamish people primarily utilized the APE and the surrounding area. Neighboring groups, including members of what are now the Suquamish, Puyallup, and Yakima Tribes, also traditionally utilized this region. The Duwamish Tribe is a Southern Coast Salish group who speak the southern dialect of the Lushootseed language (Suttles and Lane 1990). Duwamish, or *Dkhw'Duw'Absh* in the Lushootseed language, means "the people of the inside." The name refers

to Elliott Bay, the Duwamish River, and the other waterways that connect the people to the land. Upon the arrival of the first European explorers, the Duwamish people occupied at least 17 winter villages, living in over 90 longhouses throughout the Duwamish River basin and surrounding landscape (Speer 2004). Winter villages were the nexus of natural resources, political power, and ideological systems. These winter villages, including nearby seasonal habitation areas and spiritual places, were linked to the broader geographic community through kinship, trade, and diplomacy (Thrush 2007). Indigenous peoples in the area hunted deer, elk, and bears across the land, as well as ducks, geese, and other waterfowl from the estuarine environment. They fished for salmon, cod, and halibut; harvested clams; and gathered berries, camas, and other plants for food and medicine.

Although some places have completely transformed with the industrial development of the Duwamish River watershed in the twentieth century, these locations and resources remain important to the Duwamish people. They are significant in understanding the development of Seattle. The area surrounding the Lower Duwamish Superfund APE still holds significance for the Duwamish people. The following place names are from Thomas T. Waterman's ethnographic book *Puget Sound Geography* (2001 [1920]) and are written using his linguistic characters (**Figure 2-1**). One such place is Lwalb, which means "abandoned" (Waterman 2001 [1920]:120). Lwalb refers to an abandoned river channel on the southwestern side of the Duwamish. Another place name is T³ a'Lt³aLusid or "where there is something overhead across the path" (Waterman 2001 [1920]:120). This place was on the western side of the river, which is now filled in. hÛtesa'tci or "cut in two with reference to the hand," has a malevolent connotation with the Duwamish people (Waterman 2001 [1920]:120–121). As Waterman retells the legend, an evil supernatural being's mangled hand rose from the water. Waterman is unsure where exactly this spot is located along the Duwamish.

The closest Duwamish villages located to the APE are Tuqwe'Ltid or "a large open space" (Waterman 2001 [1920]:45, 121). There is some debate about where the village of Tuqwe'Ltid was located, but it is accepted that it was near the South Park Bridge (Berger and Hartmann 2013:5; Blukis Onat et al. 2008:21). "A brace supporting a rafter," or TEtc³gwEs, is for an area where trees fell over a trail, caused by a landslide, on the northern side of the Duwamish River (Waterman 2001 [1920]:121). This place is now somewhere underneath the King County International Airport.

The area where the Duwamish River narrowed and made a sharp turn was called cka'lapsEb or "neck" (Waterman 2001 [1920]:121). This area was once where the Duwamish people could collect lily bulbs (Waterman 2001 [1920]:121). Hwa'pitcld means "where one throws something," for this area was wide and flat near an old river channel (Waterman 2001 [1920]:121). Qiyawa'lapsEd, or "eel's throat," is a place name for three knolls situated on the western side of the Duwamish River, which is in the South Park neighborhood (Waterman 2001 [1920]:121). Xo'bxobti, or "canoe paddles," is where the Duwamish people harvested ash trees to make paddles (Waterman 2001 [1920]:121). This area is described as a flat river bend on the Duwamish River's eastern side. The last placename is tsitskad'b, a small promontory stuck out in the river (Waterman 2001 [1920]:121). This could refer to Turn Basin Number 3.

Another Duwamish village, squa'l-qo, or "meeting of rivers," was approximately 4.8 km (3 miles) upstream from the APE (Berger and Hartmann 2013:5; Waterman 2001 [1920]:45). This village was near where the Black and White rivers met. Waterman claimed there were additional villages near the Duwamish River, but the names were unknown to him (Berger and Hartmann 2013:5; Waterman 2001 [1920]:45).

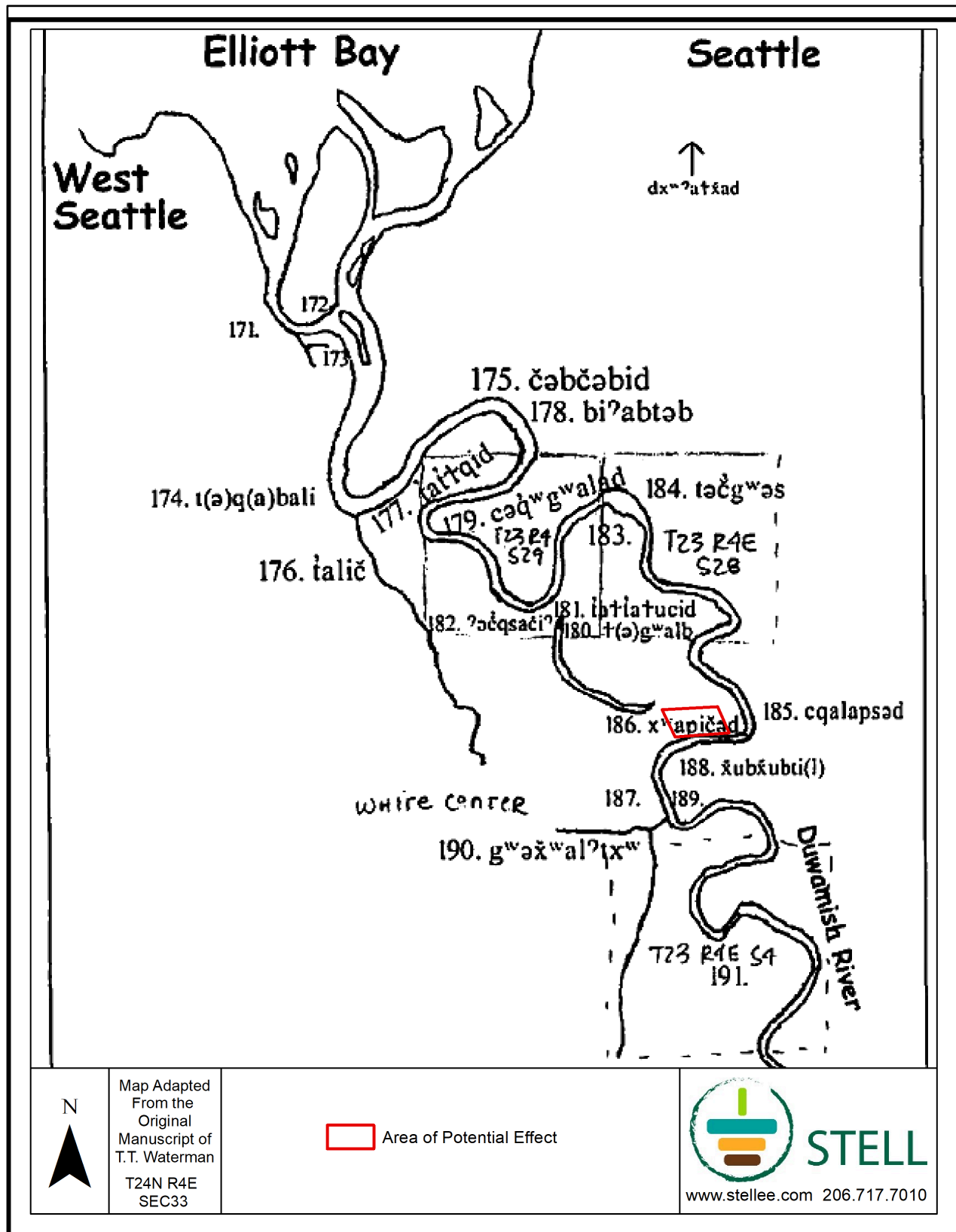


Figure 2-1. Waterman (2001 [1920]) place names map within project APE

Once non-native settlers moved into this area, the Duwamish people were pushed out of their traditional lands, especially after the 1855 Treaty of Point Elliott. The Sackman and Dewatto Duwamish communities chose to stay within the area and formed new communities with other tribes in the area (Tollefson 1992:214–216). These communities were forced to live outside of the city of Seattle. They were able to retain some of their seasonal gathering, hunting, and fishing traditions that helped supplement their diet (Tollefson 1992:214–216).

2.2.3 HISTORIC BACKGROUND

Following the arrival of non-Native settlers in the Pacific Northwest by the mid-1850s, many Native village/habitation sites were subsequently homesteaded or platted as towns. This was especially true for locations near water, at river confluences, or along traditionally utilized travel corridors/trails, many of which were in use into the historical period, if not into modern times. Extensive logging and mining activity occurred throughout the region from the mid-1800s to the present. The construction and expansion of transportation corridors associated with railroads and roadways had a profound effect on the landscape in this area (Marino 1990).

2.2.3.1 HISTORY OF KING COUNTY

Colonel Isaac Ebey and, later, John Holgate were the first Euroamerican explorers to visit King County. European settlement of the area started in 1852, with lumber, hops, coal, and fish constituting the area's first industries (Long 2006). The Oregon Territorial Legislature formed King County on December 22, 1852, and three months later in 1853, was included in the newly created Washington Territory. The county was originally named for William Rufus DeVane King, a senator from Alabama elected as the United States vice president in 1853 and died shortly after the election. In 1986, this county name was officially changed to honor the Rev. Dr. Martin Luther King Jr. (Long 2006).

The first settlers of King County were a group of farmers led by Luther Collins, who claimed land inland along the Duwamish River on September 14, 1851 (later called Georgetown). A week after the Collins party claimed their land, the initial vanguard of the Denny Party (the group credited with the founding of Seattle) arrived on Alki Point (near what is now West Seattle). The rest of the Denny Party arrived on November 13, 1851 (Long 2006).

The major industries in King County in the late 1800s were logging and coal mining. By the 1880s, sawmills and shingle mills were the main industries in many towns throughout the Puget Sound (Long 2006). Throughout this decade, hops were a major King County crop until hop lice/aphid infestations that started in 1889 prompted growers to turn to dairy farming, orchards, and other crops (Bagley 1929; Long 2006). Native Americans provided much of the labor for harvests in King County. The hop lice crisis was exacerbated by a national economic depression in the 1890s. Overall, King County recovered quickly due to the 1897 Klondike Gold Rush, during which Seattle and King County merchants provided supplies to those headed north to the goldfields (Long 2006).

2.2.3.2 HISTORY OF THE APE

Seattle's earliest non-native settlers first arrived in the Puget Sound via canoes floating down the Duwamish River from Nisqually. They were the Collins Party and settled along the Duwamish River in late September 1851, about 3.2 km (2 miles) south of the mouth of the Duwamish River. Eventually, Luther Collins filed for a Donation Land Claim. Other parties of settlers were quick to join the Collins Party in acquiring lands around Elliott Bay. These included John Holgate, William Latimer, and the Denny Party (Lange 2000). The Duwamish River was a river that meandered in

curves through the valley floor and eventually discharged into the southern end of Elliott Bay through a delta of intertidal marshlands (**Figure 2-1**).

Much of the surrounding land was submerged in high water and plus tides. Seattle was incorporated on December 2, 1869, and by the 1890s, the population was well established, and maritime traffic became a common sight on Elliott Bay. Steamboats could navigate the Duwamish River as far as Kent, but ocean-going vessels could not use the river. In 1985, Eugene Semple proposed a plan of public works, which included digging a canal from Elliott Bay to Lake Washington, filling the tide flats west of Beacon Hill (**Figure 2-2**), and straightening the Duwamish River. The Washington State Legislature authorized the formation of diking and dredging districts in that same year. By 1901, Semple began construction, sluicing the soils of Beacon Hill and transporting soil from Seattle regrade projects for filling the tide flats south of downtown Seattle.



Figure 2-2. East Marginal Way, view to the southwest. Dated: February 24, 1916 (Seattle Municipal Archives [1916] Photograph Collection # 941)

In 1909, City Engineer R. H. Thomson formed the Duwamish Waterway Commission to sell bonds for rechanneling the river. The straightening and dredging of the Duwamish River began on October 14, 1913 (Wilma 2001; **Figure 2-3** and **Figure 2-4**). The channel would allow larger ships to access the reclaimed land and alleviate the flooding that frequently occurred throughout the valley.

Dredging began at the County Poor Farm in Georgetown, filling the meanders, except for a few recessed in the channel to accommodate high water levels and turning ships. By 1920, the Duwamish Waterway reached a depth of 15 m (50 ft.) for 7.2 km (4.5 miles) (Wilma 2001). All of the original meanders were filled except for one—a short section of the original course of the Duwamish delta channels, which is still present along the southwestern shore of Kellogg Island (Thrush 2007).



Figure 2-3. Historic photograph of the Seattle tidelands looking southeast. Taken from Centennial Mill in 1902 (University of Washington digital archives, Asahel Curtis Photo Company Photographs Collection, # CUR118)

It is known that dredge spoils were used for the creation of Harbor Island, which was finished in 1909 by the Puget Sound Bridge and Dredging Company. At the time, Harbor Island was the largest artificial island in the world. Soil from Beacon Hill, Denny Hill, Yesler Hill, Jackson Hill, and Dearborne Street regrades were used in the construction of Harbor Island, in addition to the filling of the greater Duwamish delta tidelands (Stein and Goodman 2001; Wilma 2001).

By 1920, the Indigenous people who traditionally utilized resources from the Duwamish River could no longer safely gather food from that area (Thrush 2006:110). The channelization of the Duwamish River was complete, and industrial factories were established along its banks. The 1949 United States Geological Survey Seattle, South Quadrangle 7.5-minute series shows structures of all sizes up and down the Duwamish River.

2.2.3.3 APE BACKGROUND

The APE is first seen in an 1862 GLO Cadastral survey map (GLO 1862) (**Figure 2-5**) and an 1863 GLO Cadastral survey map (GLO 1863) (**Figure 2-6**). Both maps show the APE prior to any channeling of the river, with the APE being present east of the river course. The APE does not appear in 1862 to be in an area that is privately owned; however, just to the northeast, private landowners had claimed portions of the land along the river.

The following year, in 1863, the APE was located within lands owned by Mr. John Buckley. Later maps show that Buckley owned the property that the APE was in from 1863 to 1907; at least four different John Buckleys were listed in King County census records during this time. Two of these people were born in Wisconsin, one in Connecticut, and one in Washington. The first person from Wisconsin was 21 in 1889, and the other was 20 in 1892. The John Buckley from Connecticut is listed in the 1870 Census as 72 years of age and appears again in the 1871 Census. His wife was

also listed in both census records. While the 1870 Census name for her is unreadable, she was listed as E. Buckley in the 1871 Census.



Figure 2-4. Map showing route of Duwamish Waterway, Commercial Waterway, Commercial Waterway District No. 1, revised September 1, 1919 (King County Road Services 2023 Map Vault Image No. 20100824-17370).

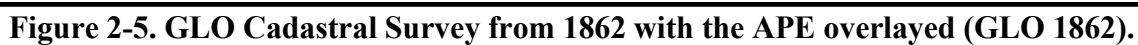




Figure 2-6. GLO Cadastral Survey from 1863 with the APE overlayed (GLO 1863).

Another John Buckley from Washington was one of four children whose parents are listed as A. Buckley and Martha Buckley; he is listed in the 1887 Census (aged 7) and 1889 Census (aged 9). Between 1896 and 1957, six John BUCKLEYS passed away within King County. One of these passed away at 75 years in 1912, while another passed away at 70 in 1932. The others are either too young or old to have been associated with the ownership of the property. In 1868, a John Buckley married an Eliza Horton in King County. Another marriage certificate from 1919 also mentions a John Buckley, who married Nathalia Ryan. A frontier justice divorce record also mentions a Jane Buckley, who divorced a John Buckley in 1867 in King County.

A 1907 Anderson map shows the Duwamish River still following a natural channel but with multiple landowners occupying the surrounding area (**Figure 2-7**). Currently, a John Buckley still owns the land where the APE is located.

A 1912 Kroll map shows the Duwamish River remaining in its natural channel. However, the course appears to have shifted slightly west on the bend of the river that the APE is located within, indicating that the southeastern portion of the river was likely underwater at this point (Kroll 1912) (**Figure 2-8**). Many of the landowners changed in this period. The large property owned by Mr. John Buckley is no longer present; instead, much of this area has been divided. The landowners that appear are Dan Shea and T. F. Burns. Only two T. F. Burns are mentioned in the Washington Census records for King County. The earliest mention is from 1896 and references T. F. Burns, who was 26 and born in California. There is another mention in 1910 of a T. F. Burns, born in Washington, who was 38 years old at the time of the census and lived in Meadow Gardens, the same area where the APE is located. This T. F. Burns is listed as the head of the household, with two brothers, J. J. and James P., and a boarder, James W. Agnew. There is also a death record for a Thomas F. Burns, who died in 1926 at age 69 in Pierce, Washington, and a Thomas Burns, who died at age 62 in King County in the year 1935. This latter death certificate matches closely with the age of the T. F. Burns mentioned in the 1910 Census, although the birth locations of the two people are different.

A 1926 Kroll map shows the Duwamish River as fully canaled and removed from its original channel north of the APE. However, the river within the vicinity of the APE still follows a natural course (**Figure 2-9**). The 1926 Kroll map does show the proposed path of the Duwamish Canal as it is labeled on the map. Many landowners on the 1926 map remain consistent with the 1912 map; however, many parcels were further divided amongst landowners. Large tracts of land were still listed as “The Meadows and Moore’s 5 Acre Tracts.” The city limits of South Park were expanded from the 1912 map.

The 1936 Metsker map shows a landscape similar to what is seen today around the APE, with the Duwamish River in its current orientation and many roads seen today (**Figure 2-10**). To the east of the APE, Boeing Field was present. Many of the large parcels that had been previously noted are no longer located on this map, with many smaller parcels having taken their place. The parcel that the APE is in appears to be owned by King County. A parcel along the river's east bank was listed as being owned by the Fisher Body Company. Fisher Body was an automobile coachbuilder founded in Detroit in 1908 (Jackson 2021). The Fisher Body Company had a Seattle Division leased to the Boeing Company. Additional parcels are listed as being owned by multiple lumber companies, including the Newell-Bissell Lumber Company. This company was formed when the Newell Mill & Lumber Company changed its name in 1917 (Lumber World Review 1917).

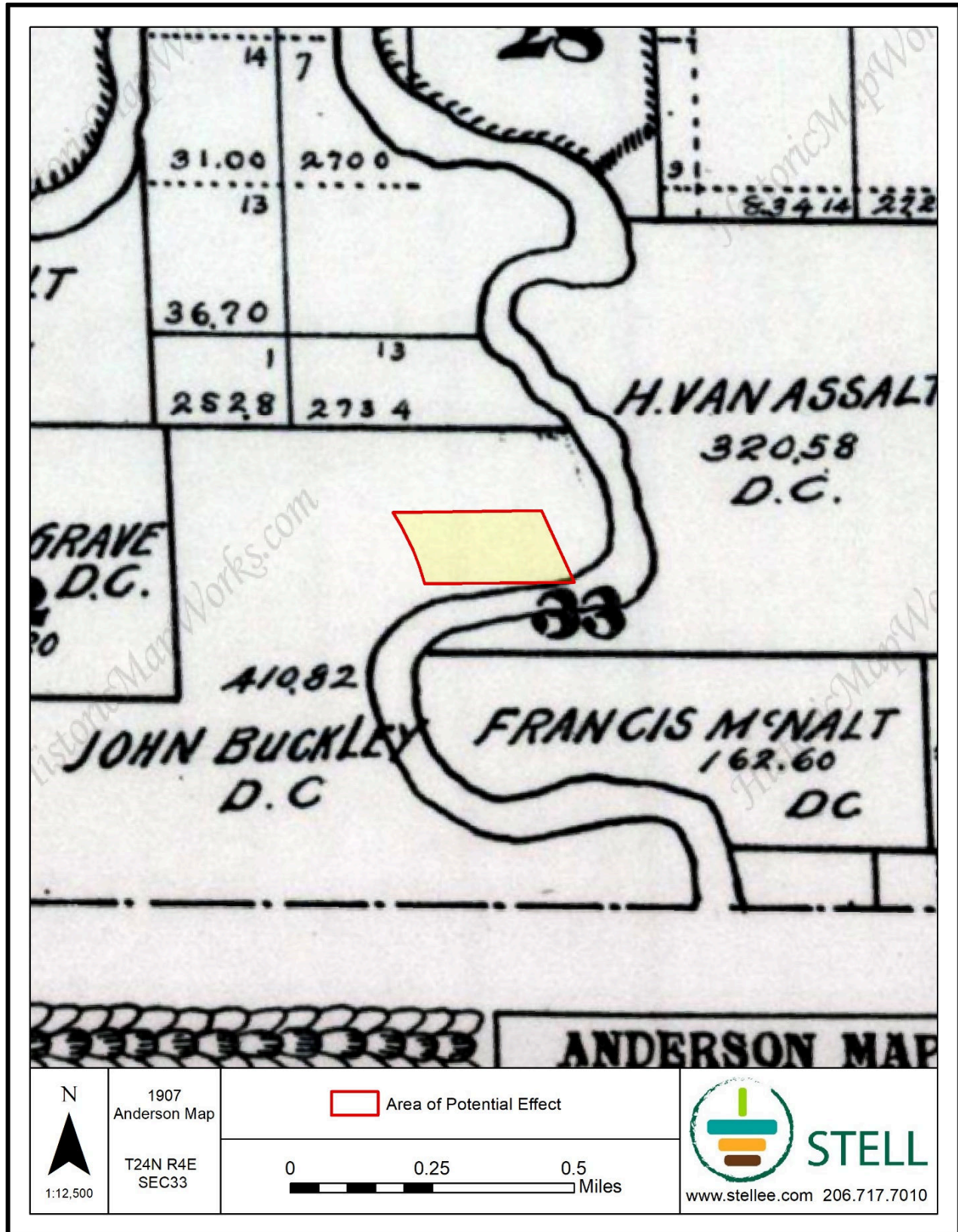


Figure 2-7. 1907 Anderson map with APE overlayed (Anderson 1907)

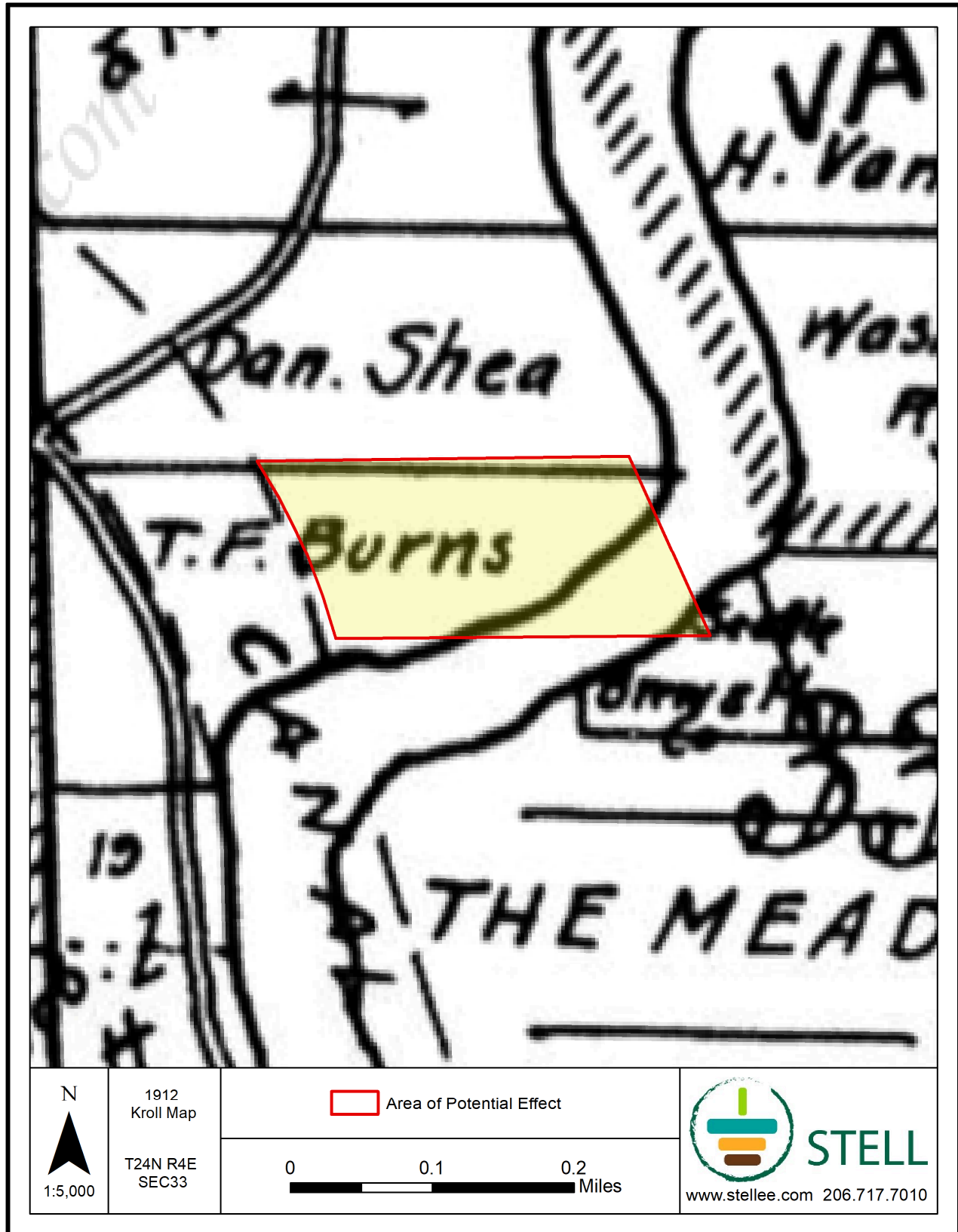


Figure 2-8. 1912 Kroll map with APE overlayed (Kroll 1912)





The 1937 aerial imagery shows the development of South Park to the west of the river. More open large tracts of land to the east of the river were noted in these images (**Figure 2-11**). To the east of the Duwamish River, East Marginal Way and railroad lines appear in their modern layout. A portion of the APE appears to have been inundated by the river in 1937, with a large semi-circular area covered by water.

In 1940, Isaacson Iron Works purchased the land currently comprising the APE. Isaacson Iron Works began in 1908 as a small smith shop on King Street in Seattle, founded by Swedish immigrant John Issacson (Caldbrick 2020; Earley and Heideman 2019). The 8531 East Marginal Way South property, known as Isaacson Plant No. 2, was adjacent to Boeing's main factory. Isaacson Plant No. 2, built by the United States Navy and run by Issacson, was the largest steel manufacturing plant on the West Coast and became a major supplier of precision parts for United States military operations during World War II. During the height of the war, it employed 1,200 workers (**Figure 2-12**), and its output included propellor shafts and precision parts for Navy vessels (Caldbrick 2020) and bulldozer blades and other parts for the Seabees which were used to construct runways in the Pacific (Earley and Heideman 2019). The company also built a steel melting plant next to Plant No. 2 in 1943 to decrease reliance on outside steel suppliers (Earley and Heideman 2019).

In March 1961, Isaacson Iron Works became full owners of the property when they bought the buildings built by the United States Navy in 1942 (**Figure 2-13**; Caldbrick 2020). In 1965, they divided Plant No. 2 and sold the melting, forging, and machining half of the plant to the Earle M. Jorgensen Company while retaining the fabrication part of the plant to the south. While the Isaacson Iron Works company went out of business in 1983, selling the fabrication plant to Boeing at that time (Earley and Heideman 2019), the Earle M. Jorgensen Company owned and operated the forge until 1992 when they sold it to a number of the managers who subsequently continued operation of the forge (Caldbrick 2020). In May 2016, Jorgenson Forge came under the ownership of Constellation Enterprises LLC, which then filed for bankruptcy. In August 2016, the forge fell under the ownership of CE Star Holdings and became Star Forge (Caldbrick 2020). One of the conditions of this sale was that Star Forge would work with the United States Environmental Protection Agency to clean up the Jorgenson Forge property, which is part of the Lower Duwamish Waterway Superfund site and has contributed heavily to the pollution in the Duwamish River and floodplains over its 70 years as a metal forging plant. In April 2018, Star Forge's owners announced that they would be closing the plant to redevelop the land (Caldbrick 2020).

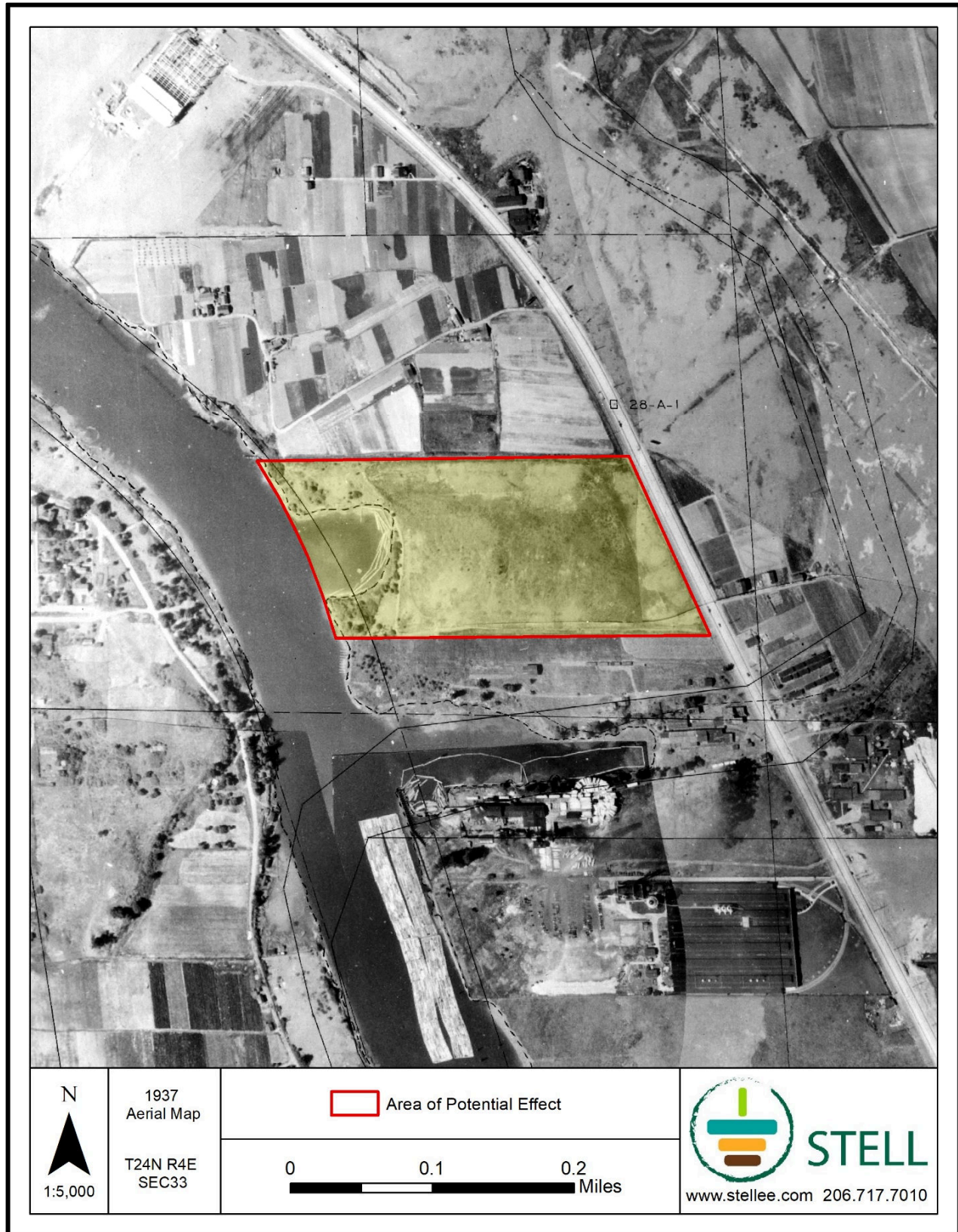


Figure 2-11. 1937 Aerial imagery with APE overlayed (King County Road Service 2023 Map Vault Image No. 240433)



Figure 2-12. Workers at Issacson Iron Works in 1943 (University of Washington Libraries 2022 Digital Collections, IND0085)

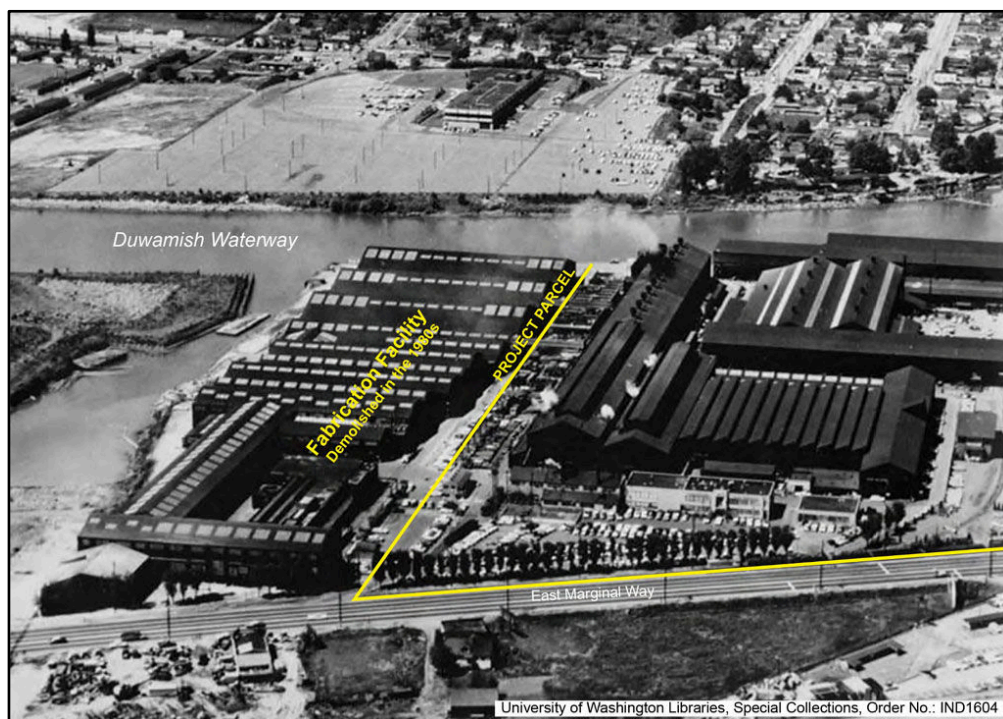


Figure 2-13. Aerial view of the Jorgenson Forge, early 1960s (University of Washington Libraries Digital Collections, IND1604)

3. RECORD SEARCH AND LITERATURE REVIEW

Stell conducted two literature reviews and record searches for this Project by consulting the Washington Information System for Architectural and Archaeological Records Data (WISAARD) repository, reviewing historical land records, maps, and online archives. The DAHP Predictive Model places the APE at very high risk for locating cultural materials. This model is based primarily on the distance to water and soil types.

Within 1.6 km (1 mile) of the APE, there are 27 cultural resource surveys, 10 archaeological sites, 2 cemeteries, 5 registered historic properties (**Table 3-1**), and 1,504 structures.

Table 3-1. Historic Properties Identified at the Star Forge Property

Historic Property ID	Historic Property Name	State Historic Preservation Office Eligibility
333378	N/A	Not Determined
720357	Isaacson Iron Works Plant Number Two	Determined Eligible
720358	Isaacson Iron Works “Black Sheep”	Determined Not Eligible
720359	Isaacson Iron Works Powerhouse	Determined Eligible
720360	Isaacson Iron Works Office Headquarters	Determined Eligible

Note:

N/A = Not Available

3.1 STELL RECORD SEARCH AND LITERATURE REVIEW

The first literature review for the Project was originally conducted in October 2019 by Perteeet (Earley and Heideman 2019) for a separate cultural resource monitoring project within the current Project area. During archaeological monitoring, Stell identified five historic properties located on the 8531 East Marginal Way South, Tukwila, WA, Star Forge property. A Historic Property Inventory form was created for each property, and properties 720357, 720359, and 720360 were determined Eligible by the State Historic Preservation Office.

A second cultural resources literature review for the Project was conducted in January of 2024 to update the previous archaeological investigations list with the current record search data on WISAARD.

3.2 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Within 1.6 km (1 mile) of the APE, there are 27 cultural resource surveys, 10 archaeological sites, 2 cemeteries, 5 registered historic properties, and 1,504 structures.

For additional information on previous archaeological investigations, see **Table 3-2**, **Table 3-3**, **Table 3-4**, and **Table 3-5**.

Table 3-2. Previous Cultural Resources Investigations within 1 Mile of the APE

Author(s)	Date	NADB No.	Title	Findings Relevant to the Current Project
Cole, Steve	5/14/2001	1339898	Heritage Resources Investigation of the South Park Cell # 41982 Tower	No archaeological or historic deposits identified.
Roedel, Kurt W.	6/6/2001	1339904	Letter to Ronda Smith Regarding Archaeological Resources Monitoring for the South Park Bridge Project	No significant archaeological resources were identified during excavation monitoring.
Historical Research Associates, Inc.	8/1/2004	1344408	South Park Bridge Project Cultural and Historical Resources Technical Report	Moderate potential for the presence of intact subsurface archaeological resources. No archaeological sites have been previously recorded in the APE. 80 historic resources; South Park Bridge is listed on NRHP; 12 others are NRHP eligible, of those, 2 are located along the Duwamish (Boeing Property and Red Brick Road are potentially eligible).
Gilpin, Jennifer	10/5/2006	1348322	Archaeological Monitoring at 9229 E. Marginal Way, Tukwila, King County, Washington	No sites were recorded. A pocket of historic artifacts including ceramics and glass was observed as likely remnants of a historic trash dump with no identifiable integrity.
Krafft, Katheryn, and Cathy Wickwire	9/30/1997	1350146	Historic Property Survey Report: Georgetown (Seattle, Washington)	34 historic properties within APE
Demuth, Kimberly, Craig Smith, Robin Hoffman, Kirk Ranzetta, Jennifer Flathman, David Harvey, Jeannie Czesla, Lucy Zuccotti, Astrida Blukis Onat, and Timothy Cowan	6/1/2008	1351645	Cultural Resources Survey for the South Park Bridge Project	3 precontact archaeological sites identified on the southern side of the Duwamish waterway: 45KI815, 45KI816, and 45KI817. One site is within the APE and two are outside of the APE. It is likely they are connected to the abandoned meander channel. Three Historic Properties within the APE: Boeing Building, Brick Road, and South Park Bridge.
Zuccotti, Lucy, Jennifer Flathman, Kimberly Demuth, and Robin Hoffman	11/4/2008	1352098	Cultural Resources Section 106 Technical Report Georgetown Steam Plant Flume Project, EOA Slip 4 Early Action Area, Lower Duwamish Waterway Superfund Site, Seattle	Surface and subsurface surveys did not locate any archaeological resources. Five historic properties in the APE: Boeing Buildings 3-323 and 3-346, the Steam Plant building, holding tank, and flume.
Foutch, Amy, Michele Punke, Jon Held, Elizabeth O'Brien, and John Fagan	7/1/2009	1353867	Cultural Resources Study for the SR 99 Intelligent Transportation System Improvements Project	No archaeological deposits identified. One historic resource identified: North 46th Street/SR 99 Overcrossing.

Author(s)	Date	NADB No.	Title	Findings Relevant to the Current Project
Roedel, Kurt, Leonard Forsman, Dennis Lewarch, and Lynn Larsen	7/5/2001	1681071	Boeing Field Runway Safety Area Compliance Archaeological Resources and Traditional Cultural Places Assessment	No significant archaeological deposits
BOLA Architecture + Planning	9/24/2012	1682897	King County International Airport / Boeing Field Seattle, Historical Documentation	Historical documentation, not cultural resource survey.
Cooper, Jason	6/1/2013	1683973	Archaeological Monitoring Program Synopsis Construction Season 1: Duwamish Sediment Other Area and Southwest Bank Corrective Measure and Habitat Project Boeing Plant 2 Seattle/Tukwila, Washington	No archaeological material was identified; isolate: one historic object (45KI1142) was recorded.
Marcotte, Jacqueline, Bryan Hoyt, Chris Lockwood, and Paula Johnson	5/17/2013	1684370	West Duwamish Trail Extension Project	No buried archaeological resources were uncovered during monitoring. Three historic-aged properties (all commercial warehouses) identified within the APE.
Schultze, Carol, Brent A Hicks, Shari Maria Silverman, and Jennifer Gilpin	2/27/2014	1684580	45KI815 Archaeological Data Recovery, South Park Bridge Replacement Project, King County, Washington	Data analysis for known site 45KI815
Schultze, Carol, Amy Jordan, Justin Butler, Jennifer Gebhardt, Angus Tierney, and Daniel Schau	3/31/2015	1686020	Archaeological Monitoring Report for the South Park Bridge Replacement Project, King County, Washington	45KI815: during monitoring, 8 additional locations associated with site extended the site boundary. New boundaries identified.
Marcotte, Jacqueline and Paula Johnson	12/1/2014	1686226	West Duwamish Trail Extension Project, Seattle, King County, Washington, Results of Archaeological Monitoring	No significant archaeological resources were identified during excavation monitoring.
Hodges, Charles	1/30/2015	1686270	Results of Geoarchaeological Monitoring at 8th Avenue Terminals, Inc., During Phase 2 Remedial Investigation Surveys	Multiple boring locations east of Slip 4. Possible buried archaeological deposits, but boring results are unclear and not consistent.
Carrilho, Yonara, and Brandy Rink	6/17/2016	1689109	Pipe Documentation at the Georgetown Steam Plant, Seattle	Wooden stave pipe associated with the Georgetown Steam Plant was uncovered, requiring monitoring
Boersema, Jana, and Anthony Cagle	8/3/2017	1689679	Cultural Resources Assessment for the Seattle City Light Technical Training Center, King County, Washington	No precontact or significant cultural material was discovered in the APE. The only cultural material found during this survey was scattered debris within the fill deposit that was not directly datable.

Author(s)	Date	NADB No.	Title	Findings Relevant to the Current Project
Berger, Margaret, and Glenn Hartmann	4/8/2013	1691049	Cultural Resources Assessment of the Duwamish Substation North Property	No above-ground cultural resources were identified within the subject property.
Lockwood, Chris, and Tom Ostrander	3/21/2014	1691097	Archaeological Monitoring of Geotechnical Boring and Monitoring Well Installation, West Michigan and 8th Avenue, King County, Washington	No prehistoric or historic archaeological resources were observed during monitoring.
Lockwood, Chris, and Brian Hoyt	4/17/2014	1691098	Archaeological Monitoring of South Park Hydrological Investigations, GSI Project - West Michigan and 8th Avenue, King County, Washington	South Park Basin is considered to have a very high likelihood for deeply buried precontact and historic archaeological resources. Isolate 45KI1183 comprised fragments of 3 to 5 bricks and one non-diagnostic whiteware sherd, associated with bash and dispersed charcoal. The isolate is in an area that was formally a meander of the Duwamish River.
Kopperl, Robert, and Charles Hodges	2/15/2017	1694843	Archaeological Resources Assessment for the 8430 Dallas Ave Warehouse Project, King County, Washington	No archaeological or historic deposits were identified.
Stropes, Tracy	10/8/2019	1695191	A Cultural Resources Assessment for the 8801 East Marginal Way Project, City of Tukwila, King County, Washington	No archaeological resources identified; four historic properties identified: warehouse building, office facility, water tower, groundwater treatment facility.
Hoyt, Bryan, and Chris Lockwood	12/14/2021	1696132	South Park Plaza Project, Seattle, King County, Washington - Cultural Resources Assessment	No cultural resources were identified.
Jones, Jessica	06/3/2022	1696843	Archaeological Monitoring at 14th Avenue S and Dallas Avenue S for a Proposed Signal Pole Installation	No cultural resources were identified.
Anchor QEA, LLC	09/2022	1697123	King County International Airport Runway 14L-32R Rehabilitation and Reconstruction Cultural Resources Survey Report	No cultural resources were identified.
Beckner, Chrisanne, Brian Drukin, Kristen Freeman, and Historic Research Associates, Inc.	11/7/2022	1697234	Cultural Resources Inventory for the Georgetown to South Park Trail Project in the City of Seattle, King County, Washington	No cultural resources were identified.

Table 3-3. Previously Recorded Archaeological Sites within 1 Mile of the APE

Site Trinomial	Site Name	NRHP Determination of Eligibility	Site Description
45KI817	Site Three	Unevaluated	Precontact Site: charcoal, shell, bird bone, fish bone, and mammal bone; depth: 190–225 cm.
45KI816	Lwalb Old Channel Two	Unevaluated	Precontact Site: shell midden, fire-cracked rock, mammal bone, bird bone, fish bone; depth: 24–195 cm.
45KI815	Lwalb Old Channel One	Eligible	Precontact Site: Shell midden, bird bone, mammal bone, fish bone, and fire-cracked rock; depth: 50–240 cm.
45KI1352	King County International Airport Historic Debris	Not Eligible	Concentration of nine cow bones found during the excavation of a utility trench from an unknown depth. One of the bones exhibited a saw cut.
45KI1351	Hotel Butler Historic Debris Concentration	Not Eligible	A subsurface debris concentration 30-50 cm below the surface, measuring 6 m ² . Associated with Hotel Butler, dating to 1913, and includes historic ceramics, glass, animal bone, oyster shells, and metal plate/cup fragments.
45KI1280	Wood-stave Pipe Segment at the Georgetown Steam Plant	N/A	A wood-stave pipe associated with the Seattle Electric Company Georgetown Steam Plant. 23.5 m of the pipe was exposed in a utility trench.
45KI1183	Not applicable	Unevaluated	Isolate: single whiteware fragment and 3 to 5 red brick fragments., circa. 1900-1950.
45KI01149	Hamm Creek Pilings	Potentially Eligible	Historic isolate.
45KI01142	Wooden wagon wheel	Unevaluated	Historic isolate, circa 1890's to 1920's.
45KI00538	Columbia and Puget Sound Railroad	Potentially Eligible	Historic isolate.

Note:

cm = centimeters

Table 3-4. Previously Recorded Cemeteries within 1 Mile of the APE

Site Trinomial	Description	Distance from APE	Comments
45KI01526	Rose Street	1.1 km (0.70) miles west-northwest of APE	Human Remains were found in 1925. The remains were found at a depth of 18 inches in sandy clay soil.
45KI00910	Maple Grave/Memorial	1 km (0.67) miles north of APE	A monument and urn of the ashes of John and Samuel, son, Maple.

Table 3-5. Historic Register-Listed Properties within 1 Mile of the APE

Site Trinomial	Listing Number	Property Name	Register	Address
45KI136	N/A	Maple Donation Claim	Washington Heritage Register	Airport Way South, Seattle, WA
45KI138	78002755	Seattle Electric Company Georgetown Steam Plant	National Historic Landmark	6605 13th Ave S, Seattle, WA
45KI139	71000872	Building No. 105, Boeing Airplane Company	National Register; Washington Heritage Register	Purcell Avenue, Tukwila, WA
45KI259	82004228	14th Avenue South Bridge – Seattle	National Register; Washington Heritage Register	Spans Duwamish River, Seattle, WA
45KI1440	100004460	Eng, Jimmie & Betty, House	National Register; Washington Heritage Register	8310 Beacon Ave. S, Seattle, WA 98118

4. METHODS

Stell Archaeologists Dana Chandler, BA; Jordan Cooper, BA; and Nichole Padovano, BA, conducted archaeological monitoring on August 21, 22, 24, 28–30, October 11 and 24, 2023, for a total of eight days of monitoring over two months. The ground-disturbing activity for the Project consisted of the decommissioning and removal of 18 USTs, decontamination and/or removal of concrete and asphalt slabs, demolition of all site buildings, and removal of soil, and if necessary, facilitate paving. Soil samples were collected on-site to define the extent of ground contamination.

Excavation and demolition monitoring focused on observing any organic or shell-midden deposits, signs of soil oxidation, lithic or bone artifacts, or animal or human bones. All other monitoring activities were conducted following the monitoring plan developed by Stell (Steinkraus 2020). See **Appendix A** for the MIDP.

4.1 UNDERGROUND STORAGE TANKS

The Project consisted of the decommissioning and removal of 18 USTs, divided between a “North Tank Vault” (NT) system and a “South Tank Vault” (ST) system. The NT was the central location for 10 USTs (**Figure 4-1**), while the ST was the central location for eight USTs (**Figure 4-2**). The USTs in each tank-bed were buried below grade but within concrete vault structures that extended above grade. Both tank nests were constructed within the basement of former buildings. Once the former buildings were demolished, the voids around the tanks were filled with sand and slag that was available from forging operations on-site. The North Tank Vault included a concrete base that was 1.5 m (5 ft.) below the surrounding grade. The concrete walls of the South Tank Vault extended slightly deeper and did not contain a concrete bottom. Forty-two soil samples between the NT and ST systems were to be collected on-site by the DH Environmental Licensed Hydrogeologist and brought back to a lab for chemical analysis.

**Figure 4-1. Location of North and South UST locations in APE;
Map provided by DH Environmental (2024).**

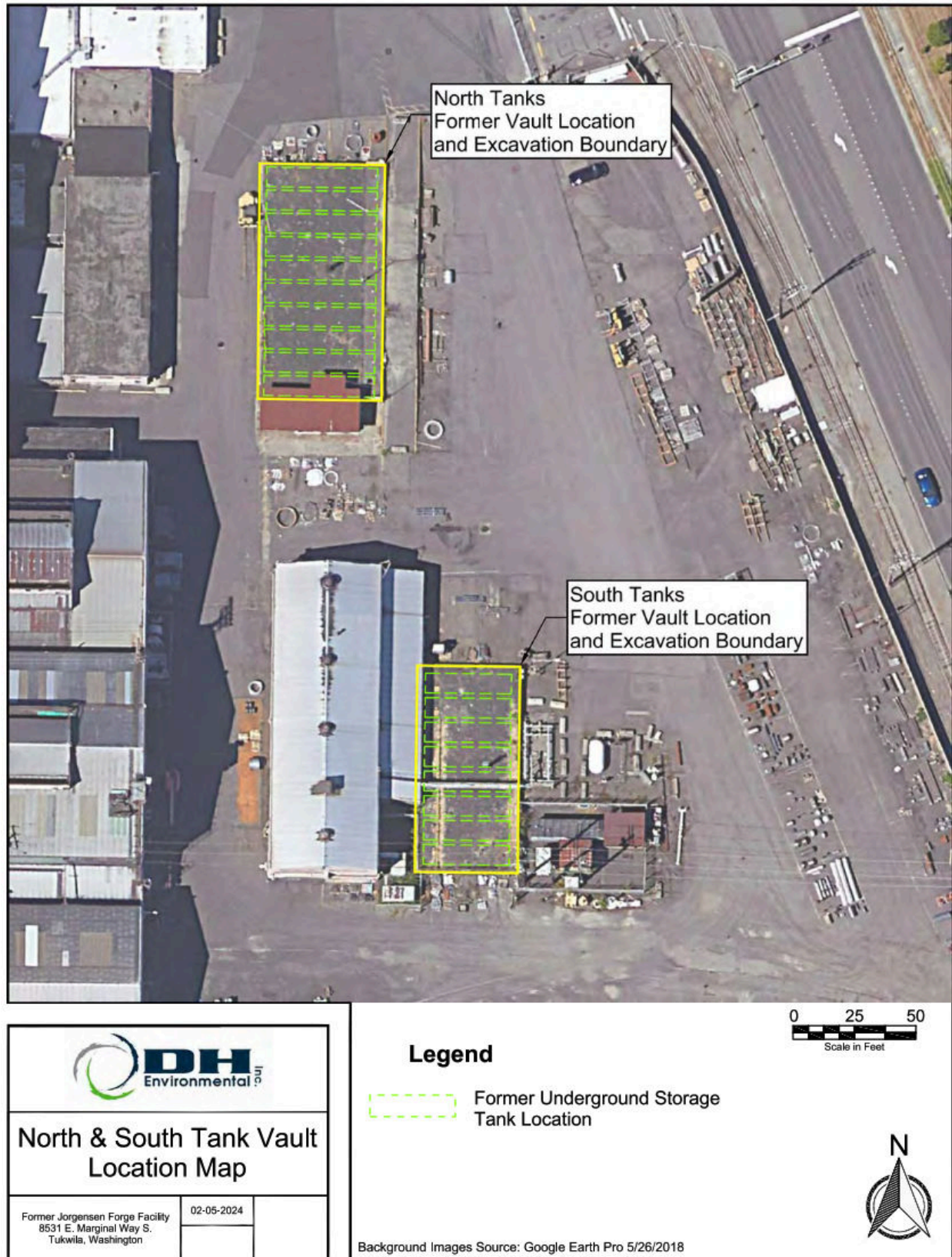
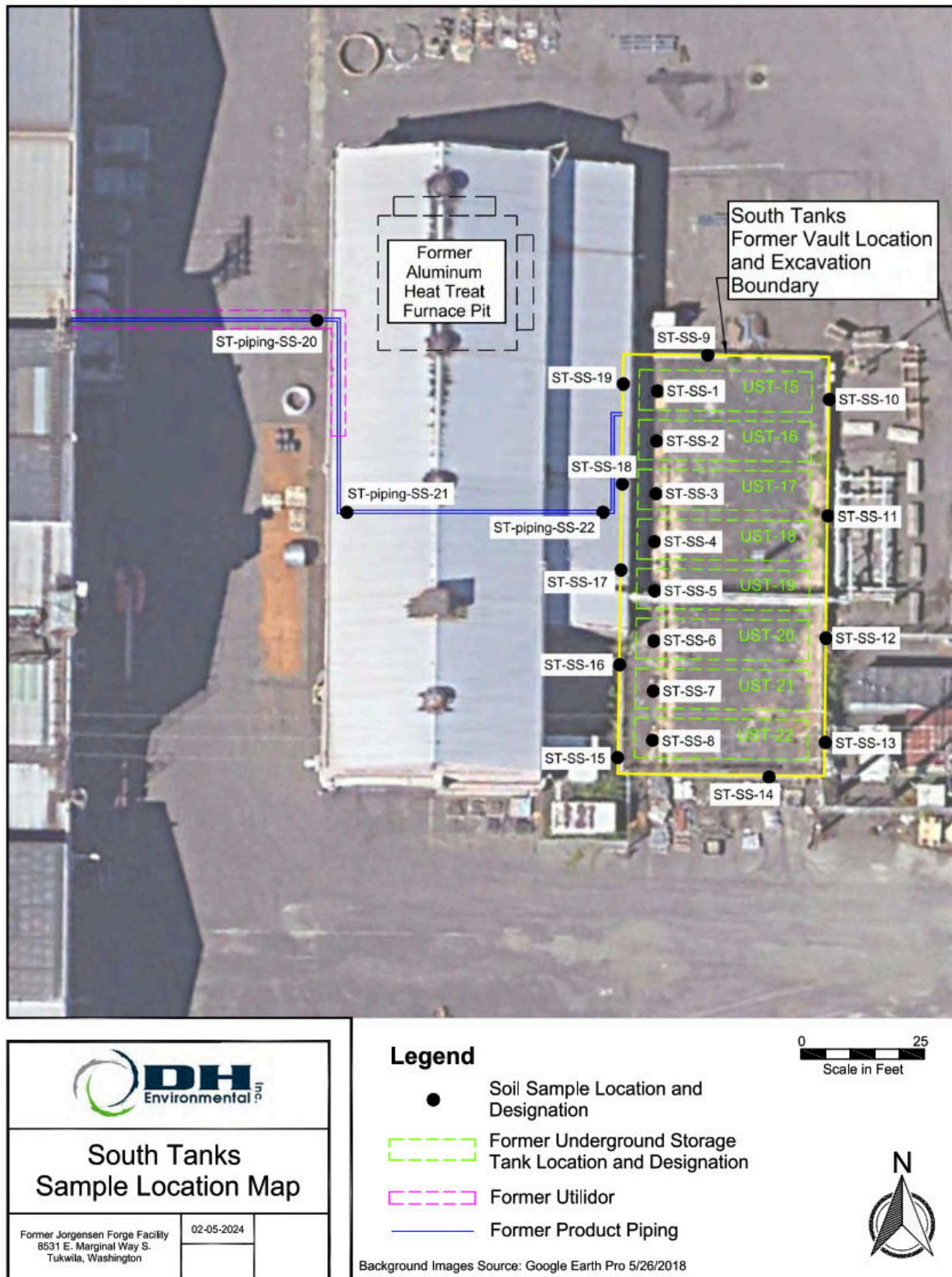


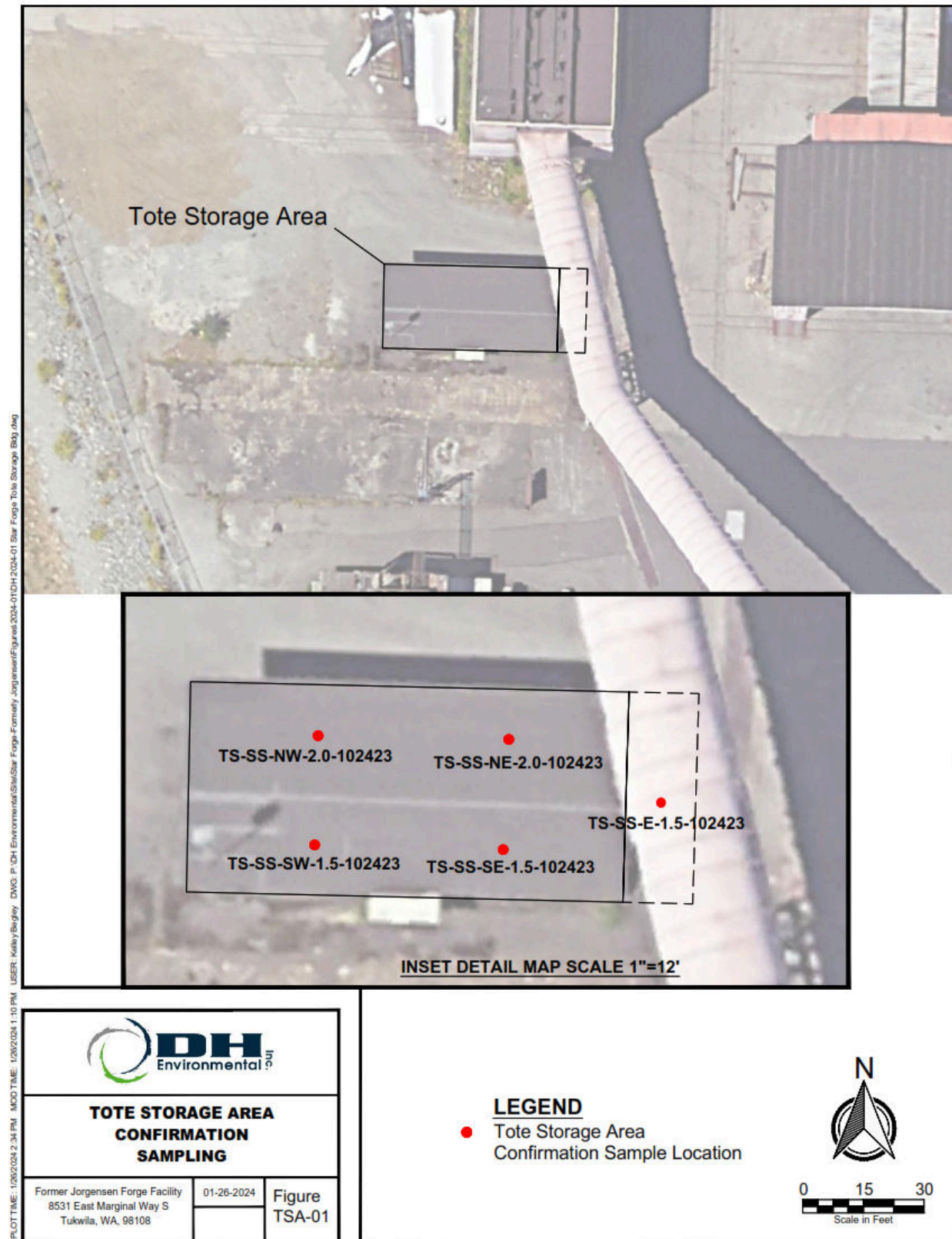
Figure 4-1. Map of North UST Sample Locations, provided by DH Environmental (2024).

Figure 4-2. Map of South UST sample locations, Provided by DH Environmental (2024)

4.2 TOTE STORAGE AREA

The Project consisted of the demolition of the Tote Storage building. The building location is shown in (Figure 4-4), Earthwork on this day included the tearing apart of a building foundation, asphalt slab, and a concrete slab, removal of the concrete, and soil scrape for sampling.

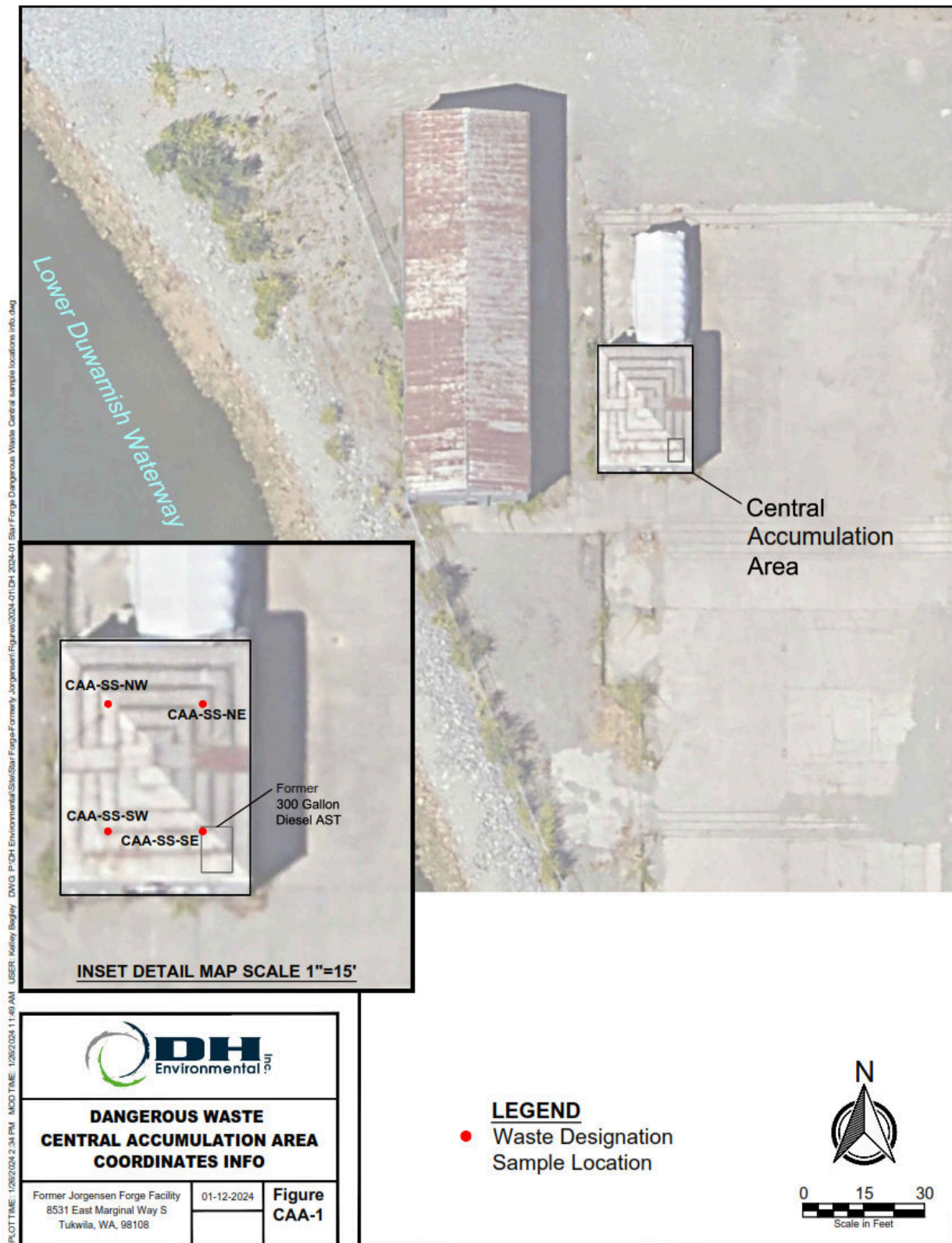
Figure 4-4. Map Tote Storage Sampling locations, Provided by DH Environmental (2024)



4.3 CENTRAL ACCUMULATION AREA/OIL AREA

The Project consisted of the demolition of the Central Accumulation Area/Oil Shed building. The building location is shown in (Figure 4-5), The ground disturbing activity of the day was excavation of a building foundation and sampling of the soil. Earthwork on this day included the tearing apart of a concrete building foundation, removal of the concrete, and soil scrape for sampling.

Figure 4-5. Map Central Accumulation Area/Oil Shed Sampling locations, Provided by DH Environmental (2024)



5. RESULTS

Archaeological monitoring was conducted on August 21, 22, 24, 28–30, and October 11 and 24, 2023, for a total of eight days of monitoring over two months. Monitoring efforts were concentrated on the North and Southern Tanks. Monitoring was also done within the Tote Storage Building and Central Accumulation Area/ Oil Shed. Monitoring was not a daily occurrence. Monitoring was conducted by Stell archaeologists Dana Chandler, BA; Jordan Cooper, BA; and Nichole Padovano, BA, as needed. Field notes and photos were recorded in daily monitoring logs (**Appendix B** [complete copies]) as partial fulfillment of the monitoring plan (**Table 5-1**). See **Appendix A** for the MIDP.

Table 5-1. Monitoring Log Summary

Date	Monitor	Cultural Materials (Yes/No)	Cultural Materials Description	Work Undertaken
08/21/2024	Jordan Cooper	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
08/22/2024	Nichole Padovano	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
08/24/2024	Dana Chandler	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
08/28/2024	Jordan Cooper	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
08/29/2024	Nichole Padovano	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
08/30/2024	Nichole Padovano	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
10/11/2024	Jordan Cooper	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.
10/24/2024	Dana Chandler	No	N/A	Tearing apart of a concrete building foundation; Removal of the concrete; Soil scrape for sampling.

See **Figure 5-3–Figure 5-13** for archaeological monitoring site photos.

No significant cultural resources were identified during archaeological monitoring.



Figure 5-1. Western wall of Aluminum building foundation with soil pile, facing northwest



Figure 5-2. Soil sample example, NT-SS-2



Figure 5-3. North Vault concrete wall removed, facing northwest.



Figure 5-4. North Vault soil sample, facing plan.



Figure 5-5. North Vault sampling example of modern brick found, facing plan



Figure 5-6. North and South UST Systems, facing northwest



Figure 5-7. North and South UST Systems, facing plan



Figure 5-8. Overview Tote Storage Area, facing west



Figure 5-9. Overview Central Accumulation Area/Oil Shed, facing south



Figure 5-10. Overview Central Accumulation Area/Oil Shed, facing east



Figure 5-11. Finding of non diagnostic copper pipe in Central Accumulation Area/Oil Shed, facing plan



Figure 5-12. Finding of non-diagnostic copper pipe in Central Accumulation Area/Oil Shed, facing plan



Figure 5-13. Finding of yellow brick with “PFB” lettering Central Accumulation Area/Oil Shed, facing plan

5.1 SOIL SAMPLE RESULTS

5.1.1 UST TANK FARM AREA

A total of 42 soil samples (SS) between the NT and ST systems were collected on-site by the DH Hydrogeologist and brought back to a lab for chemical analysis. Twenty-three samples were collected from the NT system (**Table 5-2; Figure 4-1**) and 19 samples were collected from the ST system (**Table 5-3, Figure 4-2**). Of note, the NT-SS collection began at number NT-SS-11 and numbers NT-SS-24 and NT-SS-25 were not included.

Table 5-2. UST North Tank Soil Sample Description

SS No.	Cultural Materials (Positive/Negative)	Soil Description	Location
NT-SS-11	Negative	Very dark gray fine silty sand, poorly sorted, loose, damp; Very dark gray very fine sandy silt, poorly sorted, slightly cemented, wet, many fine roots (undisturbed/native Duwamish soil), trace charcoal present; Trace orange-brown coarse silty sand, dry, poorly sorted.	UST-26 North Wall
NT-SS-12	Negative	Brown and gray fine sand, very loose, poorly sorted; Trace orange-brown clayey silt, very well sorted, very cemented, wet. Some fine roots, no gravels or wood	UST-27 East Wall
NT-SS-13	Negative	Brown and gray fine sand, very loose, poorly sorted; Trace orange-brown clayey silt, very well sorted, very cemented, wet; Gray; Very dark gray sandy silt, well sorted, slightly cemented, has diesel smell. No gravels or wood present.	UST-29 East Wall

SS No.	Cultural Materials (Positive/Negative)	Soil Description	Location
NT-SS-14	Negative	Gray and Gray-brown fine silty sand, loose, damp, poorly sorted, diesel smell. Slag present, no gravels or wood	UST-31 East Wall
NT-SS-15	Negative	N/A	UST-33 East Wall
NT-SS-16	Negative	N/A	UST-34/35 East Wall
NT-SS-17	Negative	N/A	South Wall
NT-SS-18	Negative	N/A	UST-35 West Wall
NT-SS-19	Negative	N/A	UST-34/33 West Wall
NT-SS-20	Negative	Dark gray fine silty sand, loose, damp, poorly sorted, diesel smell (oil); Dark gray/Black sand, very poorly sorted loose, wet (oil), poorly sorted.	UST-31/32 West Wall
NT-SS-21	Negative	Very dark gray silty sand, fine, loose, poorly sorted, damp (no smell). Trace very fine yellow-brown silty sand, poorly sorted, dry. Trace concrete fragments.	UST-29/30 West Wall
NT-SS-22*	Negative	Very dark gray fine silty sand, poorly sorted, loose, slight diesel smell. No wood or gravels present.	UST-28 West Wall
NT-SS-23	Negative	Brown sand, very poorly sorted, loose, damp; Very dark gray fine silty sand, loose, more damp; Slag present, no gravels or wood.	UST-26 West Wall
NT-SS-26	Negative	Brown, Red, and Gray fine silty sand, very loose, poorly sorted, damp. Many pieces of concrete present, some wood debris, some slag.	UST-26 East Floor
NT-SS-27	Negative	Brown, Red, and Gray fine silty sand, very loose, poorly sorted, damp, < 10% find sub-angular gravels throughout. Some concrete debris present, few roots. 1 transparent glass fragment, < 2 in, non-diagnostic.	UST-27 East Floor
NT-SS-28	Negative	Brown and gray fine sand, very loose, poorly sorted; Dark gray very fine silty sand, more cemented but still loose, well sorted; Very dark gray very fine sandy silt, very well sorted, some fine roots present; wood debris, concrete pieces, and slag throughout.	UST-28 East Floor
NT-SS-29	Negative	Black silty sand, loose, gritty, damp, poorly sorted. 10% gravels throughout. Trace slag. Wood and concrete pieces throughout.	UST-29 East Floor
NT-SS-30	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace very fine sandy silt very cemented, very well sorted. < 10% sub-angular gravels throughout.	UST-30 East Floor
NT-SS-31	Negative	Black very silty sand, loose, gritty, damp, poorly sorted. <10% fine sub-angular gravels throughout. Some wood pieces and concrete pieces throughout. Gasoline smell.	UST-31 East Floor
NT-SS-32	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black very fine, very silty sand. 30% fine-medium sub-angular to angular gravels throughout.	UST-32 East Floor

SS No.	Cultural Materials (Positive/Negative)	Soil Description	Location
NT-SS-33	Negative	Black, very silty sand, loose, gritty, damp, poorly sorted. More fine-large broken concrete pieces throughout.	UST-33 East Floor
NT-SS-34	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, slightly cemented, very well sorted. Medium-large pieces of wood throughout. Smells heavily of gasoline.	UST-34 East Floor
NT-SS-35	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, slightly cemented, very well sorted. ~10% fine sub-angular gravels throughout. Some fine-large broken concrete pieces throughout.	UST-35 East Floor

Note:

NT-SS-22* = Pictured Above, **Figure 5-2**

Table 5-3. UST South Tank Soil Sample Description

SS No.	Cultural Materials (Positive/Negative)	Soil Description	Location
ST-SS-1	Negative	Dark gray clayey silt, very well sorted, slightly cemented, slightly wet, roots present. Black silty sand, loose, gritty, damp, poorly sorted.	UST-15 West Floor
ST-SS-2	Negative	Gray, very fine sandy silt, cemented, very well sorted, dry. Dark gray clayey silt, very well sorted, cemented, fine roots.	UST-16 West Floor
ST-SS-3	Negative	N/A	UST-17 West Floor
ST-SS-4	Negative	N/A	UST-18 West Floor
ST-SS-5	Negative	N/A	UST-19 West Floor
ST-SS-6	Negative	Brown and Dark gray very fine sandy silt, cemented, dry, very well sorted. Brown silty sand, loose, gritty. Some fine roots throughout.	UST-20 West Floor
ST-SS-7	Negative	Organic silty soil, many medium roots. Dark gray fine sandy silt, slightly cemented, slightly wet, well sorted. Gray clayey silt, slightly wet, very well sorted. Brown silty sand, gritty, loose, poorly sorted. No gravels throughout.	UST-21 West Floor
ST-SS-8	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, very fine, slightly cemented, damp, well sorted. < 5% fine sub-angular gravels throughout. Some fine-large broken wood pieces throughout. Aggressive fuel smell.	UST-22 West Floor
ST-SS-9	Negative	Gray-brown silty sand, poorly sorted loose, damp; Very dark gray sandy silt, very well sorted, cemented, wet. Wood debris throughout, some gravels and roots	UST-15 North Wall
ST-SS-10	Negative	Very dark gray sandy silt, cemented in very thin layers, well sorted, wet; Very dark gray clayey silt, very well sorted, wet	UST-15 East Wall

SS No.	Cultural Materials (Positive/Negative)	Soil Description	Location
ST-SS-11	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose; Dark gray sandy silt, cemented, wet, poorly sorted. Many pieces of slag throughout, some wood and roots in the Dark gray sandy silt and silty sand – undisturbed organics	UST-17/18 East Wall
ST-SS-12	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose. Many wooden pieces throughout	UST-20 East Wall
ST-SS-13	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose	UST-22 East Wall
ST-SS-14	Negative	Dark gray sandy silt, wet, cemented, many roots and wood debris; Dark gray silty sand, damp, loose	UST-22 South Wall
ST-SS-15	Negative	N/A	UST-22 West Wall
ST-SS-16	Negative	N/A	UST-20/21 West Wall
ST-SS-17	Negative	N/A	UST-18/19 West Wall
ST-SS-18	Negative	N/A	UST-17 West Wall
ST-SS-19	Negative	N/A	UST-15 West Wall

Soil samples were conducted on the first 15 centimeters (6 inches) of exposed soil directly below the removed UST concrete foundation. The exposed soil from the NT was about 2 m (6.5 ft.) below ground surface, while the soil from the South UST System was about 2.6 m (8.5) ft. below ground surface. No cultural resources were identified during the process.

5.1.2 TOTE STORAGE AREA

Earthwork on this day included the tearing apart of a building foundation, asphalt slab, and a concrete slab, removal of the concrete, and soil scrape for sampling. A total of 6 soil samples were collected at the surface, below the removed slab. The sediment observed was yellow-brown silty sand, with some bands of grey silt. Some debris was observed by the archaeologist, including metal pipes and metal rebar. No cultural resources were identified during the process.

5.1.3 CAA/OIL STORAGE AREA

The ground disturbing activity of the day was excavation of a building foundation and sampling of the soil. The archaeologist inspected the soil in between truckloads of concrete being hauled away. A total of 6 soil samples were collected at the surface, below the removed slab. Some debris was observed by the archaeologist, including brick, glass shards, and metal rebar. One brick observed and recorded had lettering embossed, spelling “PFD”. Also recorded was a copper tube. Neither of these items were diagnostic. No cultural resources were identified during the process.

6. INTERPRETATIONS AND CONCLUSIONS

DH contracted Stell to conduct cultural resource monitoring for the Project, at 8531 East Marginal Way South in Tukwila, WA. The APE covers 20.2 acres of land; discrete areas within this APE were used for sampling. Stell conducted archaeological monitoring on August 21, 22, 24, 28–30, and October 11 and 24, 2023, for a total of eight days of monitoring over two months.

The findings of this report concur with prior cultural resource investigations within the vicinity that identified large fill deposits, and any intact precontact or early historic-era cultural resources will be deeply buried. In the next 10–20 years, many of the cultural resources situated around the Project APE will be considered archaeological in nature, most of which would be associated with early industry along the riverway, particularly the development of the Boeing Company.

This report summarizes monitoring activities for DH’s environmental assessment for the Star Forge Facility Demolition Project. No significant cultural resources were discovered during monitoring.

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APPENDIX A

MONITORING AND INADVERTENT DISCOVERY PLAN

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CULTURAL RESOURCES REPORT COVER SHEET

Author: Geri Knight-Iske

Title of Report: Star Forge Facility Demolition Project Cultural Resources Monitoring and Inadvertent Discover Plan

Date of Report: August 4, 2023

County(ies): King Section: 33 Township: 24 Range: 4E
Quad: Seattle North Acres: 20.2

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐ Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

Archaeological Site #:

HPI 720360

HPI 720357

HPI 720359

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STAR FORGE FACILITY DEMOLITION PROJECT CULTURAL RESOURCES MONITORING AND INADVERTENT DISCOVERY PLAN

King County, Washington

August 4, 2023

Prepared for:



DH Environmental, Inc.
1011 SW Klickitat Way #107
Seattle, WA 98134

Prepared by:



Stell
6100 219th St. SW, Suite 480
Mountlake Terrace, WA 98043

By Geri Knight-Iske, MS, RPA

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Appendix A: Inadvertent Discovery Plan

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1 INTRODUCTION

1.1 PROJECT INFORMATION

DH Environmental, Inc. (DH) is conducting an undertaking for remediation and demolition of existing structures on a private parcel located adjacent to the Duwamish River in Tukwila, Washington (WA). The project will include removal of partially buried underground storage tanks that are in a concrete vault, demolish all site buildings with little to no soil removal to facilitate paving the site,, and fill in the onsite concrete vaults. The project work is occurring at the Star Forge property in Tukwila, King County, WA. DH has subcontracted with Stell Environmental, Inc. (Stell) to comply with the State Environmental Policy Act (SEPA). The Project is located at Parcel No. 000160-0023, 8531 E Marginal Way S. in Tukwila, King County, WA. The parcel is 20.2 acres of developed land.

The current project will include:

- removal of 18 underground storage tanks,
- decontaminate and/or remove concrete and asphalt slabs,
- demolition of all site buildings, and
- removal of limited soil to facilitate paving.

The Project area is within an area designated as very highly likely to yield cultural materials by the Washington State Department of Archaeology and Historic Places (DAHP) predictive model. Nineteen Cultural Resources surveys have been conducted within 0.5 miles of the Project area, and nine archaeology sites (including precontact, historic-era, and multicomponent sites) have been documented within 1 mile of the Project.

1.2 PROJECT AREA

The Project area is located on the right (eastern) bank of the Lower Duwamish Waterway, approximately 4 miles upstream from the mouth of the Duwamish River, in Section 33 of Township 24 North, Range 4 East, Willamette Meridian. The Project is located in King County Parcel No. 000160-0023, in King County, WA (**Figure 1-1** and **Figure 1-2**).

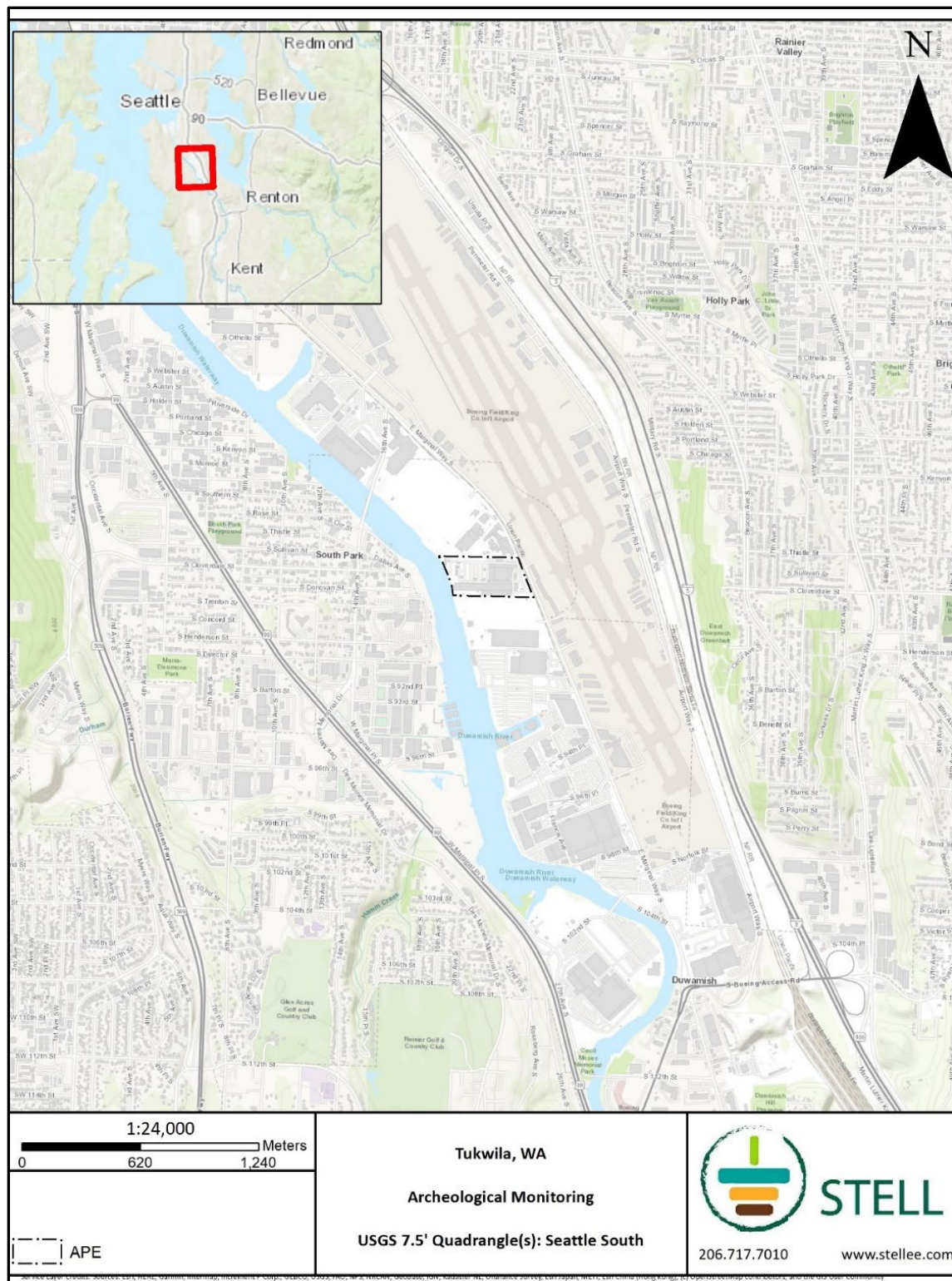


Figure 1-1. Project vicinity map.



Figure 1-2 Star Forge Facility Demolition Project Area.

1.3 PROJECT BACKGROUND

A cultural resources review within the Project area (which did not include any fieldwork) was conducted in October of 2019 by Perteet (Earley and Heideman 2019). This was for a separate project within the current Project area. In the report, one of the recommendations made was that archaeological monitoring should be conducted within this parcel due to the likelihood of locating previously undocumented cultural materials. Please see Earley and Heideman (2019) for more background information of the Project area.

1.4 REGULATORY ENVIRONMENT

This project is subject to the SEPA, which mirrors the National Environmental Policy Act. SEPA requires that all major actions sponsored, funded, permitted, or approved by Washington State and/or local agencies consider the impacts of the planned action on the environment and properties of historical, archaeological, scientific, or cultural importance (Washington Administrative Code 197-11-960). Especially those that are or could be listed on the National Register of Historic Places (NRHP) or other historic registers, including the Washington Heritage Register or King County Landmarks. The DAHP is the lead agency for considering the effects of a proposed action on cultural resources. It provides formal recommendations to local governments and other Washington State agencies for appropriate treatments or actions.

2 ARCHAEOLOGICAL MONITORING PLAN

To satisfy the requirements of DAHP, Stell will provide on-site monitoring, daily logs during monitoring activities, and a technical report at the close of monitoring for the Star Forge Facility Demolition Project. James Brown, MS, RPA, will be the lead archaeologist on this Project. Mr. Brown meets the Secretary of the Interior's, and thus Washington State's, criteria for a Professional Archaeologist. Mr. Brown has extensive experience conducting archaeological surveys, assessments, and monitoring in the Puget Sound region.

2.1 ON-SITE MONITORING

The archaeological monitor will observe any ground-disturbing activities within the Project area. The monitor will closely look for any organic or shell midden deposits, signs of soil oxidation, lithic or bone artifacts, or animal or human bones. Nine historic buildings are located on the Project parcel. Determinations of eligibility have been coordinated with DAHP prior to this stage of the Project. All historic buildings are slated for demolition. Aside from these buildings, no previously recorded cultural resources are within the Project area. If artifacts or other potential archaeological deposits are observed, the archaeological monitor will direct the contractor to temporarily cease work in the immediate vicinity while the monitor conducts a close inspection.

The archaeological monitor may occasionally request a temporary halt to work activities to document archaeological materials or for a closer inspection of an area or spoils. Such documentation usually takes a few minutes (entailing photographs and written descriptions) but may take longer. The archaeologist will give an estimate of the amount of time needed to document materials to the equipment operator and/or foreman and will update them on any changes to the estimate.

If potentially significant archaeological deposits are discovered during the investigation while the archaeological monitor is on site, the monitor will direct the contractor to cordon off the area within 30 feet of the discovery and initiate the find reporting and evaluation processes described in the Inadvertent Discovery Plan (**Appendix A**). If evidence of cultural resources is found in exposed surfaces within the Project area, it will be further investigated to establish whether it is eligible for listing in the NRHP.

If human remains are encountered, the King County Sherriff and Medical Examiner will be immediately notified (**Appendix A**). If the remains are determined not to be associated with a criminal investigation, the DAHP will be immediately contacted, as well as any affected tribes, if applicable (**Appendix A**).

2.1.1 MONITORING LOG

The archaeological monitor will complete a monitoring log for each monitoring session to document time in the field, the day's progress and findings, and any difficulties encountered, and actions proposed or taken to alleviate them.

2.1.2 MONITORING REPORT

Following the conclusion of archaeological monitoring activities, Stell will prepare a report describing the conduct and findings of this work effort. The report will include a discussion of the Project, the methods used in monitoring, and observations about site geology, environmental history, and any cultural resources that were observed. Photographs, sketches, or maps may be

included as needed. The report will be submitted to DH in complete draft form prior to it being sent to the DAHP and affected tribes for review.

2.1.3 HEALTH AND SAFETY

Stell will follow a Health and Safety Plan for this Project. Staff will be briefed on that plan and will at all times comply with it. Field staff will have all necessary training and certification prior to commencing monitoring activities including Hazardous Waste Operations and Emergency Response (HAZWOPER) training.

3 REFERENCES

Earley, Amber, and Eileen Heideman

2019 *Cultural Resources Assessment of the Star Forge Development Project, King County, Washington*. Prepared for Star Forge LLC. Prepared by Perteet, Seattle, Washington.

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**APPENDIX A:
INADVERTENT DISCOVERY PLAN**

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November 26, 2019

CULTURAL RESOURCES INADVERTENT DISCOVERY PLAN

This Cultural Resources Inadvertent Discovery Plan details the steps to follow should the unanticipated discovery of cultural resources occur during ground disturbance by Star Forge staff, volunteers, contractors, or subcontractors.

BACKGROUND

The Puget Sound area has a rich cultural history, and archaeological sites in King County provide a record dating back over 12,000 years. Archaeological resources are material remains of past human life that are 50 years old or older. The ancestors of today's Duwamish, Muckleshoot, Puyallup, Snoqualmie, Stillaguamish, Suquamish, and Tulalip tribes (the Tribes) left behind the oldest archaeological materials in King County. Prehistoric archaeological sites pre-date Euro-American settlement and include Native American artifacts of stone, shell, and wood, and human remains and grave goods. Historical archaeological sites post-date Euro-American settlement that began in 1850 in King County. Historical period archaeological sites come from historic occupation and use by native people, Euro-Americans, Americans, and other non-natives.

Archaeological sites tell us about the history and prehistory of King County, as well as inform us about past fish and animal populations, climate, and how people responded to changes to them. Known archaeological sites are sites that are listed in the Washington State Archaeological Site Inventory or that have been verified by a professional archaeologist and documented in some other way. Many archaeological sites have been disturbed over the past 160 years of development in King County. However, significant archaeological resources remain intact across King County and cultural materials are frequently discovered during ground-disturbing activities such as trenching, foundation excavation, grading, channel clearing, vegetation removal or planting, fence installation, and landscaping. These activities have the potential to destroy archaeological materials that may be present.

Archaeological sites, both known and undiscovered, are protected by federal, state, and local laws, regulations, and codes. The specific cultural resources laws, regulations, and codes that apply to a project are determined by the project's regulatory context, which is based on permitting, funding, and land ownership. Federal laws include Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act. State laws and regulations include RCW 43.21.C, RCW 27.53, RCW 27.44, Executive Order 05-05, and WAC 25-48. In particular, the Archaeological Sites and Resources Act (RCW 27.53) prohibits knowingly excavating or disturbing prehistoric and historical archaeological sites on public or private land without a state-issued excavation permit. The Indian Graves and Records Act (RCW 27.44) prohibits knowingly destroying American Indian graves and requires re-interment under supervision of the appropriate Indian Tribe following inadvertent disturbance. Local codes include King County Code 20.62.150, the Executive Procedures for Treatment of Cultural Resources (AEP LUD16-1), and the Tukwila Municipal Code 16.60.040

Most archaeological sites have not been recorded or even discovered because most land in King County has yet to be surveyed for cultural resources. So even if there is no known site in a given project area, it is still possible that the project will affect a previously unidentified archaeological site.

EXPECTATIONS

If project review determines there is little chance of encountering undisturbed archaeological materials, whether it be due to past known disturbance or landform history, then project work may proceed with no additional archaeological investigation. Even so, it is important that project field staff be on the lookout for indications of an archaeological site during planned ground disturbance and that they contact a professional archaeologist if potentially significant cultural materials are identified.

Examples of potentially significant archaeological resources include (see Figures 1 through 4):

- Artifacts in association with obvious changes in soil color and texture.
- An area of charcoal or charcoal-stained soil, especially with concentrations of shells or bones.
- Clearly prepared surfaces that suggest temporary stability, such as a corduroy road, a flat-lying layer of brick, or a plastered surface.
- Arrowheads, stone tools, or concentrations of stone chips.
- Large concentrations or dumps of historical bottles and cans, or other historical material that is older than 50 years in age. Note that old glass is usually thicker and a different color than modern beverage bottles, and old dumps typically do not contain plastic.
- Human remains.
- Old privies (outhouses).
- Buried fire pits or ovens.
- Buried foundations or intact wall segments.
- Clusters of animal bones associated with burned rocks or stone tools or chips.
- Fragments of basketry, cordage, nets, or traps made of wood or bark.
- Fire-darkened or fire-reddened rocks that are usually broken and may be associated with fire-reddened layers of soil.
- Constructed grades, especially railroad grades with rails, ties, trestles, and bridges.

Examples of cultural materials that are probably not culturally significant include:

- Pilings without attached structural wood materials.
- Fragments of asphalt and concrete or loose bricks or concrete footings in the fill.
- Broken glass fragments or scattered pieces of broken ceramics.
- Scattered metal items in the fill.
- Concentrations of coal, cinders, lumber, wood debris, or sawdust without associated artifacts.

When a cultural resource is first identified, the extent and boundaries of the cultural deposit or artifacts are not usually fully known. In such cases, a professional archaeological survey may be required before decisions about next steps can be made. If an archaeological site will be affected by a project, then the Washington State Department of Archaeology and Historic Preservation (DAHP) may recommend that the cultural materials be avoided by altering the project design. Alternatively, DAHP may ask for help to support further cultural resources assessment and investigation by a professional archaeologist in order to evaluate the significance of the find. If significant cultural resources are indeed present and adverse effects cannot be avoided, then cultural resources mitigation may be necessary. Treatment of identified archaeological resources would be determined through consultation among King County Historic Preservation Program (KCHPP), DAHP, and the Tribes.

INADVERTENT DISCOVERY PLAN

The following provisions will be followed if construction or other ground-disturbing activities cause disturbance to buried cultural resources:

1. If any Star Forge employee, contractor, or subcontractor believes that he or she has uncovered any cultural resource at any point in the project, all work within at least 30 feet of the discovery shall cease. The Star Project Manager will immediately notify a professional archaeologist (either a King County staff archaeologist or a contracted consulting archaeologist, referred to hereafter as the Project Archaeologist) who will determine whether a potentially significant cultural resource was encountered.
2. If the Project Archaeologist determines that a potentially significant cultural resources was encountered or if the finding is unclear, then the Project Archaeologist will notify the designated Project Manager, as well as immediately contact DAHP and KCHPP to report the unanticipated discovery of cultural resources. All cultural material will be treated as potentially eligible for listing in the National Register of Historic Places (NRHP) until further investigation and evaluation is complete. Following notification of DAHP and KCHPP, the Project Archaeologist will notify any affected tribal governments. The Project Archaeologist will work with DAHP to determine which tribe(s) should be consulted.
3. The designated Project Manager will take appropriate steps to protect the discovery in order to protect the site's integrity. For example, vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site, and overnight protection may be required. The discovery vicinity will continue to be protected until the appropriate course of action is decided upon through consultation and treatment of the discovery is complete. All communications between the project staff and any agency about cultural resource issues will go through the Project Archaeologist.
4. Project ground disturbance may continue beyond the discovery area if additional effects to the cultural resource are not anticipated. Continued demolition activities will be conducted to the extent that no additional impacts to cultural resources should take place. The total area of work stoppage will be adequate to provide for the security, protection, and integrity of the discovery in accordance with state laws and regulations regarding cultural resources. Ground disturbance may continue elsewhere in the project area while documentation and assessment of the cultural resource proceeds. Ground disturbance at the discovery may only resume after DAHP formally notifies Star Forge that treatment is complete.

5. Routine documentation of newly discovered cultural material should not impact construction schedules. Where complex or extensive cultural remains are encountered, the designated Project Manager, Project Archaeologist, KCHPP, and other involved qualified archaeological personnel will determine the appropriate level of cultural resources documentation and treatment of the resource after consultation with DAHP and representatives of affected tribal governments.
6. All prehistoric and/or historical cultural material discovered during project ground disturbance will be recorded by a Professional Archaeologist on a Washington State Site Inventory Form using standard techniques. Site overviews, features, and artifacts will be photographed. Stratigraphic profiles and soil/sediment descriptions will be prepared for any subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps. No subsurface excavations into the site will occur and no artifacts will be collected prior to the Project Archaeologist obtaining a state-issued excavation permit.
7. Cultural features, horizons, and artifacts detected in buried sediments may require further evaluation using hand-dug test units to clarify aspects of integrity, stratigraphic context, or feature function. Test units may be excavated in controlled fashion to expose features; collect radiocarbon, floral, or faunal samples; or interpret stratigraphy in undisturbed contexts. A test unit might also be used to bisect a feature or to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's potential to address significant research domains. Excavations will be conducted using professionally accepted techniques for controlling provenience of recovered materials. Testing an archaeological site in this manner may require a state-issued excavation permit or an approved work plan, depending on the project's regulatory context.
8. Soil excavated for purposes of cultural resources investigation will be screened through 1/4-inch mesh. Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded on a standard form. Test excavation units will be recorded on unit level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. Radiocarbon and macrofossil samples will be taken from intact subsurface features exposed by shovel/auger probes or test units. A stratigraphic profile will be drawn for at least one wall of each test excavation unit. All prehistoric and/or historical artifacts collected from the surface or from probes and test units will be analyzed, cataloged, and temporarily curated by King County. Ultimate disposition of cultural materials will be determined in consultation with the designated Project Manager, KCHPP, DAHP, and the affected tribe(s).
9. Within 90 days of concluding fieldwork, the Project Archaeologist will prepare a summary describing any and all archaeological investigation associated with the unanticipated discovery. Copies of the summary report will be submitted to KCHPP, DAHP, and the affected tribe(s) for review. The report may recommend mitigation if site testing shows that the archaeological site is eligible for listing in the NRHP. Mitigation could be required if the project cannot avoid further negative impacts to the cultural resource. Mitigation steps would be determined through consultation with the designated Project Manager, KCHPP, DAHP, and the affected tribe(s).

HUMAN REMAINS

Additional steps are required if the unanticipated discovery includes human remains. Buried human remains can include purposeful burials, any skeletal part of a human body, or goods included in a grave regardless of ethnic origin. Any identified human skeletal remains will be treated with dignity and respect at all times. Should construction or other ground-disturbing activities cause disturbance to human remains the following provisions will be followed:

1. If an employee of Star Forge, contractor, or subcontractor discovers human remains, then all work within at least 50 feet of the discovery will stop to provide for the total security, protection, and integrity of the human skeletal remains in accordance with Washington State law. No persons other than the proper law enforcement personnel, qualified professional archaeologists, and DAHP staff will be authorized direct access to the discovery location after the area is secured. Nobody else should touch or photograph the remains. The designated Project Manager will prioritize securing the discovery area.
2. The designated Project Manager will immediately call local law enforcement. The local law enforcement official may arrange for a representative of the King County Medical Examiner's office to examine the discovery. The King County Medical Examiner and local law enforcement official will determine whether the human remains should be treated as a crime scene or an archaeological site. After contacting local law enforcement, the designated Project Manager will also notify the Project Archaeologist and KCHPP.
3. If the King County Medical Examiner determines that the human remains should be treated as a crime scene, then the police will take jurisdiction over the remains. If the King County Medical Examiner determines that the remains are non-forensic, then DAHP will take jurisdiction over the remains. A non-forensic burial is a historical period Euro-American burial or a burial of Native American ancestry.
4. If the remains are non-forensic, then the State Physical Anthropologist will make a determination if the remains are Native American or non-Native American. The ethnic origin, or ancestry, of the discovered human remains will be determined through consultation with DAHP, the Project Archaeologist, KCHPP, and the affected tribe(s). Treatment as to the future preservation, excavation, and disposition of the remains will also be decided upon through consultation. Tribal access to the human remains will be allowed when the affected tribe(s) representative(s) are designated. Coordination for tribal member access must go through the designated tribal representative. The strict control of a burial location is mandated to ensure the safety and integrity of the burial feature and remains.
5. No Native American human remains will be removed from a site without the explicit consent and concurrence of the affected tribe(s) and DAHP. If disinterment of Native American human remains becomes necessary, then the consulting parties will jointly determine the final custodian of the human skeletal remains for re-interment.
6. Within 30 days of final treatment of human remains, the Project Archaeologist will prepare a summary describing any and all archaeological investigation associated with the unanticipated discovery, as well as the chain of custody and details on the final disposition of the remains. Copies of the summary report will be submitted to KCHPP, DAHP, and the affected tribe(s) for review.

CONFIDENTIALITY

Archaeological sites where cultural resources are discovered can become targets of vandalism and illegal removal activities. Archaeological sites have been destroyed by artifact collectors or curious visitors, so site locations are not made public. Property owners and agencies with a need to know can be told about site locations on their property. DAHP and KCHPP maintain archaeological site databases and can share sensitive site location information with appropriate parties. Otherwise, personnel from Star Forge, volunteers, contractors, and subcontractors shall keep and maintain all information regarding any discovered archaeological resources as confidential, especially the discovery of human remains. Information such as maps, records, or other information identifying the location of archaeological sites, historic sites, artifacts, or the site of traditional, ceremonial, or social uses and activities of Indian Tribes is exempt from public disclosure consistent with state law (RCW 42.56.300). Personnel from Star Forge, volunteers, contractors, and subcontractors should not contact the media or share information regarding a discovery on social media without consent. If needed, the Project Archaeologist can brief staff, volunteers, and contractors on the procedures to follow should potentially significant cultural resources be discovered.

STATE AND LOCL GOVERNMENT CONTACTS**Washington State Department of Archaeology and Historic Preservation (DAHP)**

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King County, Washington

King County Medical Examiner

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King County Sheriff

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(206) 296-3311 (office non-emergency)

Philippe LeTourneau, KCHPP Archaeologist

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Duwamish Tribe (For Public Outreach)

Cecile Hanson, Tribal Chairwomen
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cecile@duwamishtribe.org

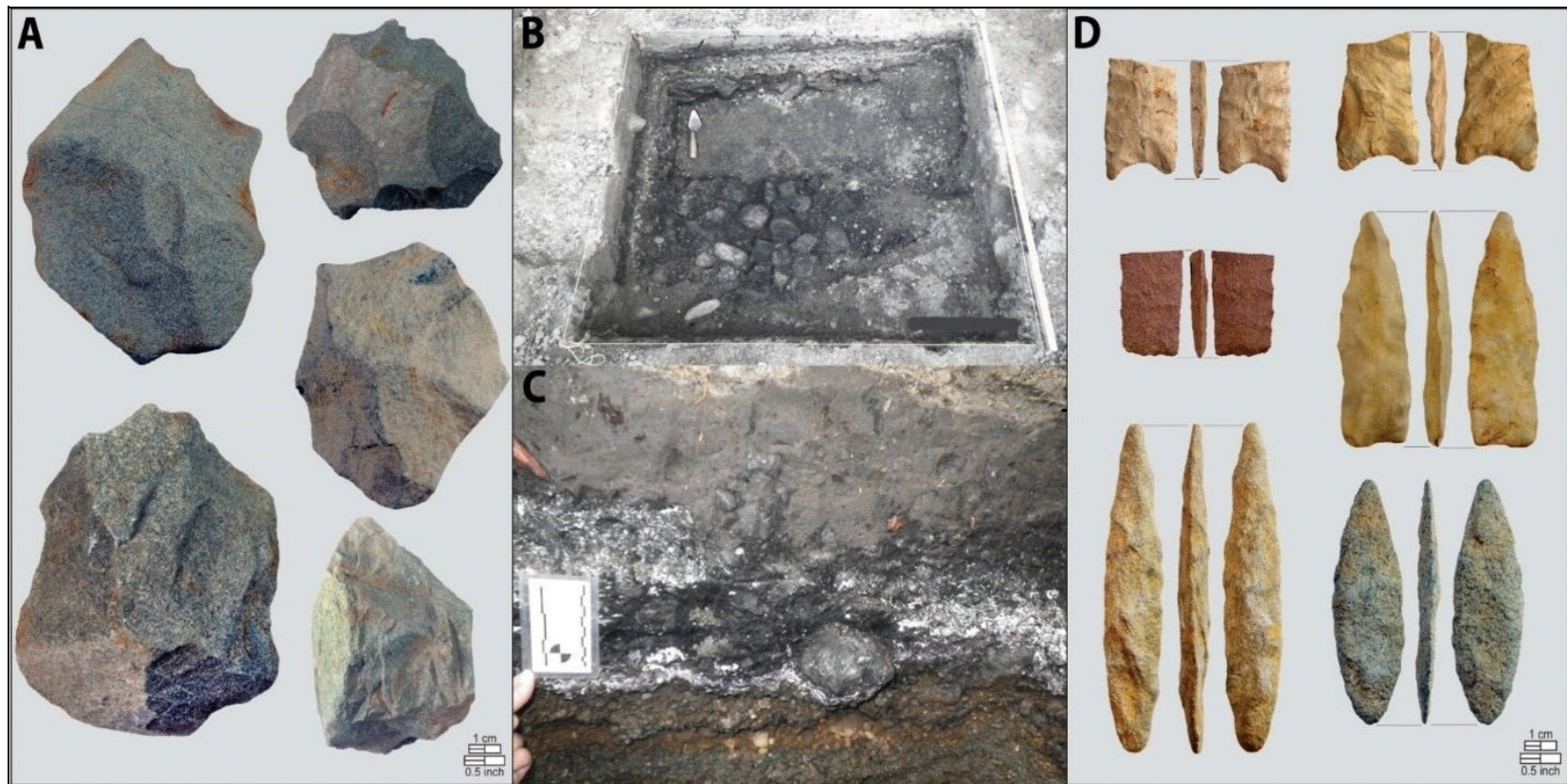


Figure 1. Examples of potentially significant pre-contact period cultural materials: (A) lithic cores; (B) oven; (C) shell midden; and (D) projectile points.

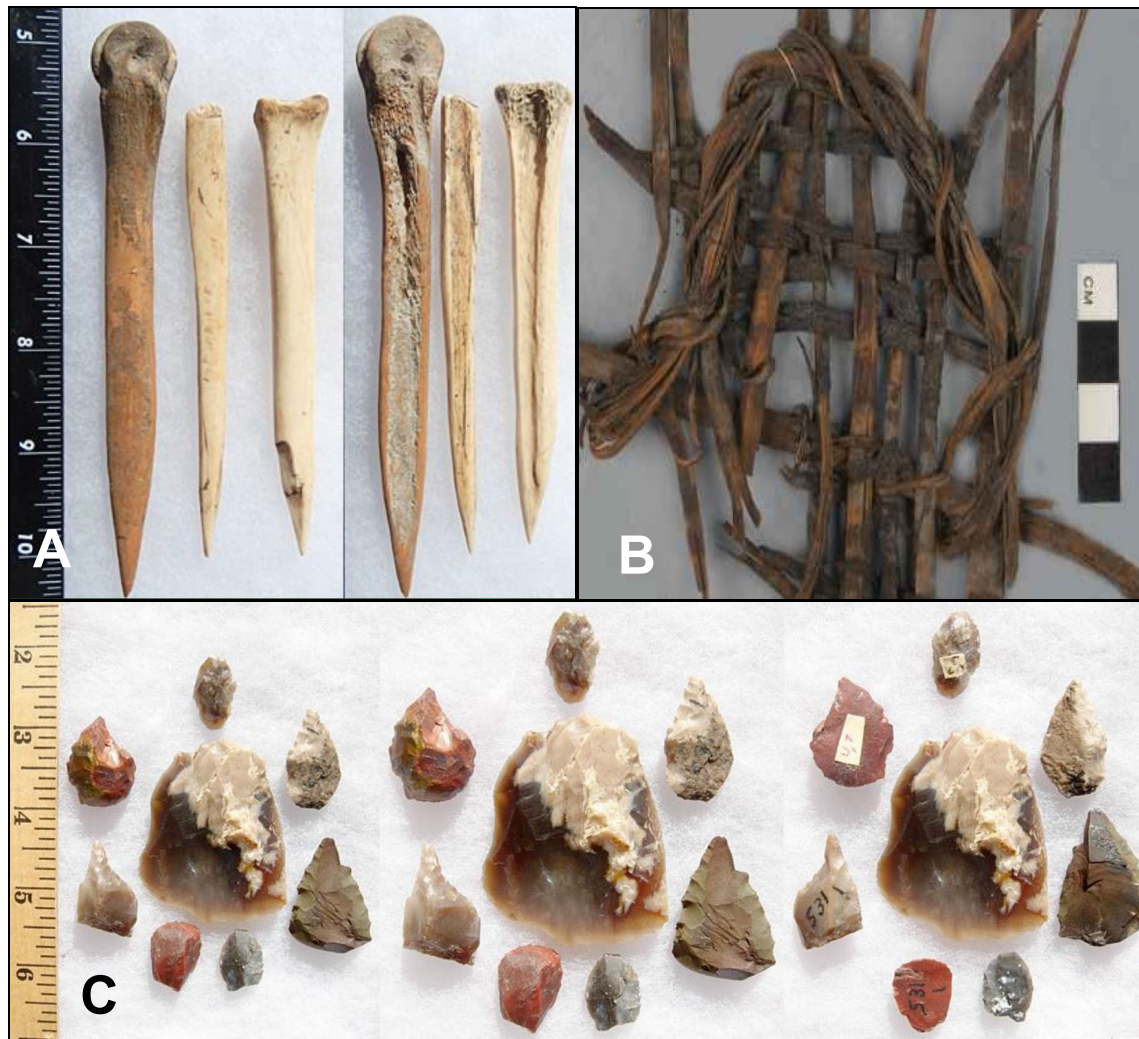


Figure 2. Other examples of prehistoric period cultural materials: (A) bone tools; (B) basket; and (C) flakes and stone tools.



Figure 3. Examples of potentially significant historical cultural materials that may be within the fill in the project area: (a) riveted chimney pipe and riveted oven in trench wall; (b) historic debris layer; (c) two-tier lumber supporting a brick wall in ruin; and (d) wood plank floor.



Figure 4. Other examples of historical period cultural materials: (A) bottles, metal, and other residential items; (B) historical dump; and (C) old railroad grade.

APPENDIX B
DAILY MONITORING LOGS

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Stell Star Forge Demolition

Monitor: Jordan Cooper

Date: August 21, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Earthwork on this day included the tearing apart of a concrete building foundation, removal of the concrete, and soil scrape for sampling. The maximum depth reached by the excavator was no more than 35 centimeters below surface (cmbs). The sediment observed was a yellow-brown silty sand, with modern debris throughout, including metal rebar, concrete, nondiagnostic red and yellow brick, and decolorized glass shards.

Monday, August 21th, 2023

Archaeologist arrived on site at 7:25 am and left at 2:15 pm. At 7:30 am, the archaeologist went through an official safety briefing, got their badge, and went through the excavation game plan.

The ground disturbing activity of the day was the start of excavation on the North and South Vaults. The excavation plan consists of removing all concrete floor in the North Vault, remove any remaining exposed piping, and excavating test pits for soil sampling. Drilling to uncover an unknown pipe started at 8:45 am in the North Vault. At 9:28 am the pipe was exposed and anything remaining in the pipe was pumped. The pipe ran into the Aluminum Building that is south of the North Vault. Discussions about tearing down the building at a later date delayed some excavation until 11:27 am, during which a pit was dug to determine the direction of the pipe. This continued until after lunch when the team began to tear down the concrete walls of the South Vault and the concrete floor of the North Vault. The archaeologist inspected the soil along the exposed walls and floor in both vaults. While the archaeologist was onsite, only a total of four soil samples were collected. Some nondiagnostic debris was observed by the archaeologist, including brick, glass shards, and metal rebar. **No cultural resources were identified during the process.**

Stell
Star Forge Demolition

Photo Log



Figure 1. Overview start of day, view North Vault.



Figure 2. Overview start of day, view South Vault.

Stell
Star Forge Demolition



Figure 3. Unidentified piping running out of North Vault; prompted exploratory excavation.



Figure 4. Unidentified piping running out of North Vault with Aluminum Building.

Stell
Star Forge Demolition



Figure 5. Eastern wall of the South Vault after removing the concrete wall.



Figure 6. Overview end of day, view South Vault.

Stell Star Forge Demolition

Monitor: Nichole Padovano

Date: August 22, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Two diesel underground storage tank (UST) systems were to be demolished as part of the Star Forge Demolition plan. Each UST system was the central location for several UST pipes. The North UST System had 10 USTs, numerically labeled North to South UST-26 – UST-35, while the south UST System only had 7 USTs, numerically labeled North to South UST-15 – UST-22. Soil samples were from every UST were collected on site by the principal hydrologist and brought back to a lab for analysis.

Due to exposed pipelines, building borders, and lack of accessible ground fill, only part of each UST System was properly exposed enough to collect soil samples. On the North UST System, a total of 7 soil samples were collected from UST-35 – UST-29, leaving 3 USTs (UST-28 – UST-26) incomplete. On the South UST System, a total of 5 soil samples were collected from UST-22 – UST-20 and UST-15 – UST-16, leaving 2 USTs (UST-19 – UST-20) incomplete.

Tuesday, August 22nd, 2023

The ground disturbing activity of the day was pit excavation at the North and South UST Systems. An excavator, located within the pit, would scoop about 6 inches (in) of the exposed soil directly below the removed concrete foundation and present the soil to the archaeologist and hydrologist above on ground. Archaeologist would inspect the soil while the hydrologist collected samples. Excavation began at 11:01 and ended for the day at 12:32. A total of 12 USTs had soil samples collected. The soil from the North UST System was about 6 feet (ft) below ground surface (bgs), while the soil from the South UST System was about 8 ft bgs. Archaeologist arrived on site at 06:45 and left at 13:00.

Stell
Star Forge Demolition

Monitor Log

North UST System

Soil Sample (SS)	Depth of SS	Cultural Material	Soil Description	Located	Photo Log
NT-SS-10	6.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, slightly cemented, very well sorted. ~10% fine sub-angular gravels throughout. Some fine-large broken concrete pieces throughout.	UST-35 Tank Floor	Figures 7-8
NT-SS-9	6.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, slightly cemented, very well sorted. Medium-large pieces of wood throughout. Smells heavily of gasoline (Bunker C?)	UST-34 Tank Floor	Figures 9-10
NT-SS-8	6.5 ft bgs	Negative	Black, very silty sand, loose, gritty, damp, poorly sorted. More fine-large broken concrete pieces throughout.	UST-33 Tank Floor	Figures 11-12
NT-SS-7	6.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black very fine, very silty sand. 30% fine-medium sub-angular to angular gravels throughout.	UST-32 Tank Floor	Figures 13-14
NT-SS-6	6.5 ft bgs	Negative	Black very silty sand, loose, gritty, damp, poorly sorted. <10% fine sub-angular gravels throughout. Some wood pieces and concrete pieces throughout. Gasoline smell.	UST-31 Tank Floor	Figures 15-16
NT-SS-5	6.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace very fine sandy silt very cemented, very well sorted. < 10% sub-angular gravels throughout.	UST-30 Tank Floor	Figures 17-18
NT-SS-4	6.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted. 10% gravels throughout. Trace slag. Wood and concrete pieces throughout.	UST-29 Tank Floor	Figures 19-20

*Of Note: Numbering for soil samples NT-SS-1 through NT-SS-10 has since changed to NT-SS-26 through NT-SS-35.

Stell
Star Forge Demolition

South UST System

Soil Sample (SS)	Depth of SS	Cultural Material	Soil Description	Located	Photo Log
ST-SS-8	8.5 ft bgs	Negative	Black silty sand, loose, gritty, damp, poorly sorted; trace black clayey silt, very fine, slightly cemented, damp, well sorted. < 5% fine sub-angular gravels throughout. Some fine-large broken wood pieces throughout. Aggressive fuel smell.	UST-22 Tank floor	Figures 21-22
ST-SS-7	8.5 ft bgs	Negative	Organic silty soil, many medium roots. Dark gray fine sandy silt, slightly cemented, slightly wet, well sorted. Gray clayey silt, slightly wet, very well sorted. Brown silty sand, gritty, loose, poorly sorted. No gravels throughout.	UST-21 Tank floor	Figures 23-24
ST-SS-6	8.5 ft bgs	Negative	Brown and Dark gray very fine sandy silt, cemented, dry, very well sorted. Brown silty sand, loose, gritty. Some fine roots throughout.	UST-20 Tank floor	Figures 25-26
ST-SS-3	8.5 ft bgs	Negative	Gray, very fine sandy silt, cemented, very well sorted, dry. Dark gray clayey silt, very well sorted, cemented, fine roots.	UST-15 Tank floor	Figures 27-28
ST-SS-2	8.5 ft bgs	Negative	Dark gray clayey silt, very well sorted, slightly cemented, slightly wet, roots present. Black silty sand, loose, gritty, damp, poorly sorted.	UST-16 Tank floor	Figures 29-30

Stell Star Forge Demolition

Photo Log

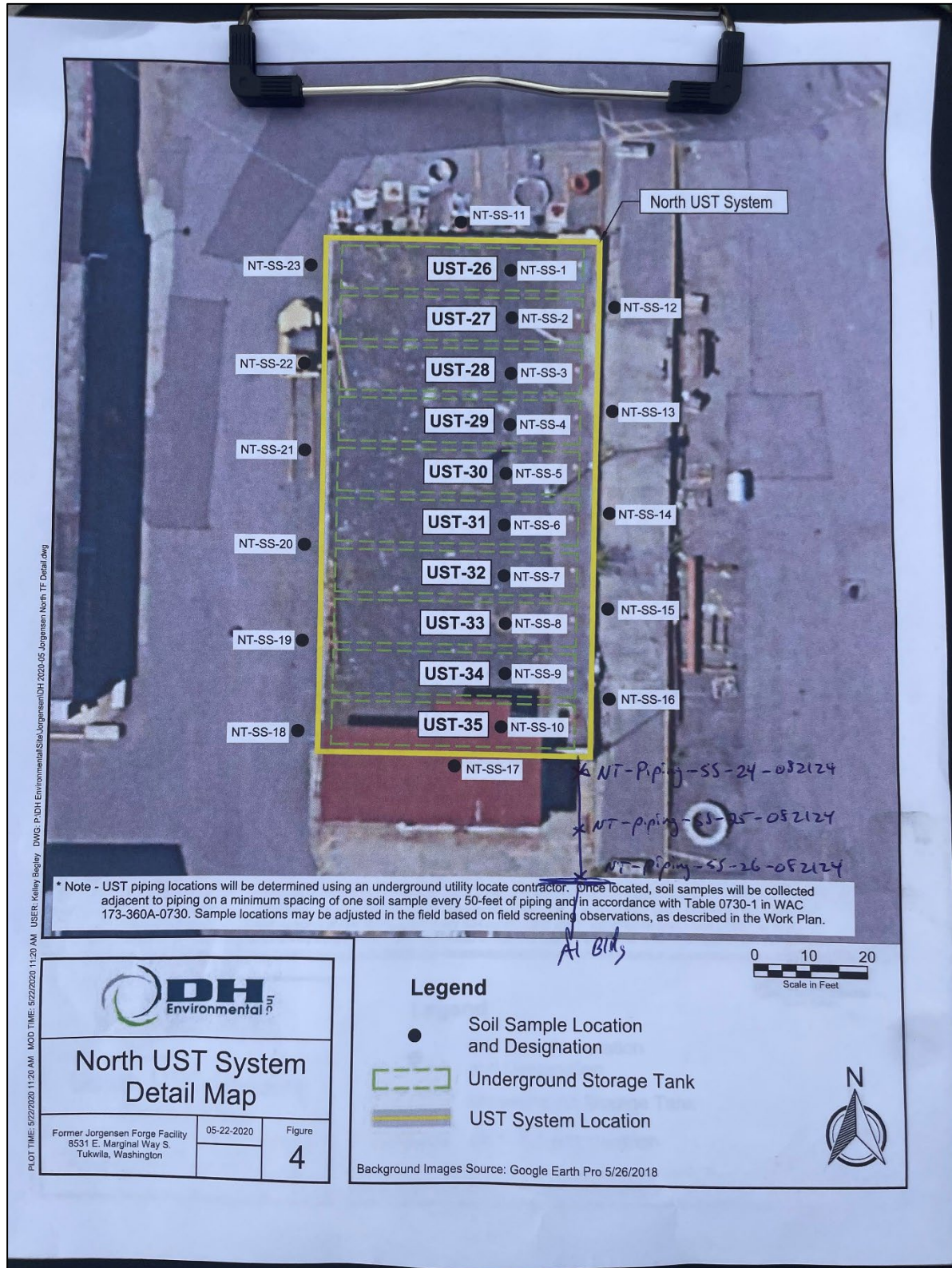


Figure 1: North UST System Detail Map

Stell Star Forge Demolition

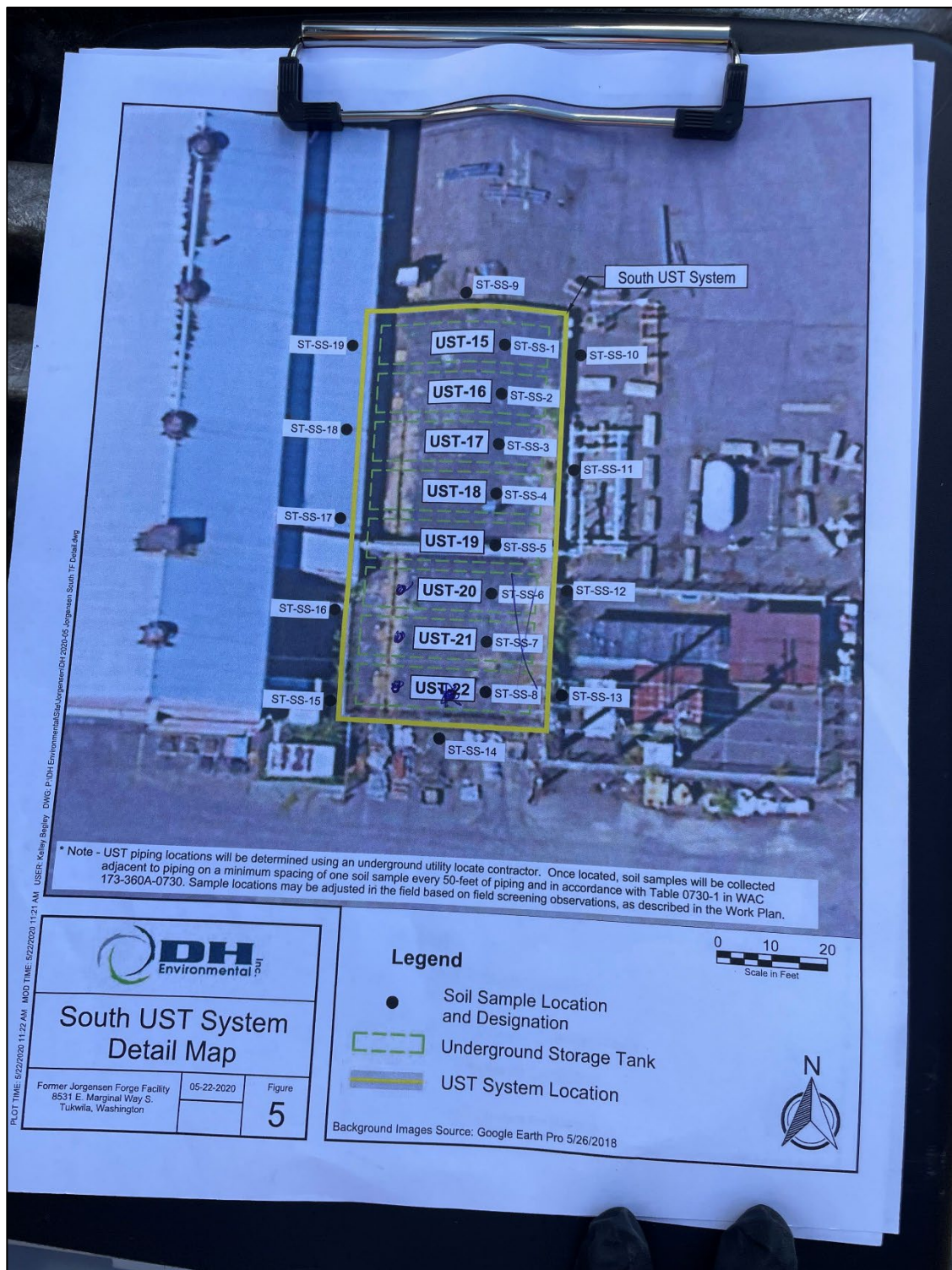


Figure 2: South UST System Detail Map

Stell
Star Forge Demolition



Figure 3: Overview at start of day, construction crew removing concrete foundation from North UST System; facing S



Figure 4: Overview of North UST System at start of soil sampling, with part of concrete foundation removed, facing S

Stell
Star Forge Demolition



Figure 5: Overview at start of soil sampling showing cleared section, facing E



Figure 6: Overview at start of soil sampling showing partially cleared section, facing NE

Stell
Star Forge Demolition



Figure 7: NT-SS-10 Soil Sample



Figure 8: NT-SS-10 Overview, facing E

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Figure 9: NT-SS-9 Soil Sample



Figure 10: NT-SS-9 Overview, facing E

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Figure 11: NT-SS-8 Soil Sample



Figure 12: NT-SS-8 Overview, facing E

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Figure 13: UST-32 Soil Sample



Figure 14: UST-32 Overview, facing NE

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Figure 15: UST-31 Soil Sample



Figure 16: UST-31 Overview, facing NE

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Figure 17: UST-30 Soil Sample



Figure 18: UST-30 Overview, facing NE

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Figure 19: UST-29 Soil Sample



Figure 20: UST-29 Overview, facing NE

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Figure 21: UST-22 Soil Sample



Figure 22: UST-22 Overview

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Figure 23: UST-21 Soil Sample



Figure 24: UST-21 Overview

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Figure 25: UST-20 Soil Sample



Figure 26: UST-20 Overview

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Figure 27: UST-15 Soil Sample



Figure 28: UST-15 Overview

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Figure 29: UST-16 Soil Sample



Figure 30: UST-16 Overview

Stell Star Forge Demolition

Monitor: Dana Chandler

Date: August 24, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Earthwork on this day included the tearing apart of a concrete building foundation, removal of the concrete, and soil scrape for sampling. The maximum depth reached by the excavator was no more than 35 centimeters below surface (cmbs). The sediment observed was a yellow-brown silty sand, with modern debris throughout, including metal rebar, concrete, nondiagnostic red and yellow brick, and decolorized glass shards.

Thursday, August 24th, 2023

Archaeologist arrived on site at 09:40 and left at 13:45. At 09:45, the archaeologist went through an official safety briefing, got their badge, and went through the excavation game plan.

The ground disturbing activity of the day was excavation of a building foundation and sampling of the soil. An excavator broke apart and removed the concrete foundation, then jars of the soil underneath were taken from no more than one inch below the surface. The archaeologist inspected the soil in between truckloads of concrete being hauled away. After the concrete was hauled away, soil samples were collected from no more than one inch below the surface. A total of 6 soil samples were collected. Some debris was observed by the archaeologist, including brick, glass shards, and metal rebar. One brick observed and recorded had lettering embossed, spelling “PFD”. Also recorded was a copper tube. Neither of these items were diagnostic. **No cultural resources were identified during the process.** Excavation began at 09:45 and ended for the day at 13:30.

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Photo Log



Figure 1. Overview start of day, view north.

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Figure 2. Copper debris, nondiagnostic.

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Figure 3. Nondiagnostic copper debris, thickness.

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Figure 4. Nondiagnostic brick with lettering.

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Figure 5. Nondiagnostic brick with lettering, height.

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Figure 6. Overview end of day, view east.

Stell Star Forge Demolition

Monitor: Jordan Cooper

Date: August 28, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Earthwork on this day included the tearing apart of a concrete building foundation, removal of the concrete, and soil scrape for sampling. The maximum depth reached by the excavator was no more than 35 centimeters below surface (cmbs). The sediment observed was a yellow-brown silty sand, with modern debris throughout, including metal rebar, concrete, nondiagnostic red and yellow brick, and decolorized glass shards.

Monday, August 28th, 2023

Archaeologist arrived on site at 11:40 am and left at 3:30 pm. At 11:45 am, the archaeologist went through an official safety briefing.

Upon arriving, the North Vault concrete walls were removed for Nathan (DHE) to grab soil samples. The ground disturbing activity of the day was predominately removal of the southern, southeastern, and southwestern concrete walls in the North Vault. No work was done on the South Vault. Roughly 20 red bricks were located in the soil of southeastern wall after removing the concrete wall. There were no markings on the red bricks; they were undiagnostic. Milled wood debris was identified from the western and eastern wall after the removal of the concrete wall. Once the concrete walls were removed excavation for soil sampling began. The archaeologist inspected the soil in between samples which were collected from no more than one inch below the surface. A total of five soil samples were collected. **No cultural resources were identified during the process.**

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Photo Log



Figure 1. Overview start of day, facing the southern wall in the Northern Vault.



Figure 2. Red brick debris, nondiagnostic.

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Figure 3. Eastern wall of the North Vault.



Figure 4. Western wall of the North Vault.

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Figure 5. North Vault sample example photo.

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Figure 6. North Vault sample example photo.

Stell Star Forge Demolition

Monitor: Nichole Padovano

Date: August 29–30, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Two diesel underground storage tank (UST) systems were to be demolished as part of the Star Forge Demolition plan. Each UST system was the central location for several UST pipes. The North UST System had 10 USTs, numerically labeled North to South UST-26 – UST-35, while the south UST System only had 7 USTs, numerically labeled North to South UST-15 – UST-22. In addition to the soil samples

Soil samples were from every UST were collected on site by the principal hydrologist and brought back to a lab for analysis.

The remaining soil samples from each UST system were collected this week. Further excavation and soil sample collections that require an archaeologist present are expected to be conducted in the upcoming weeks.

Tuesday, August 29th, 2023

The ground disturbing activity of the day was pit excavation at the North and South UST Systems. However, due to incomplete concrete removal, soil sampling did not occur, and the archaeologist was not needed. Archaeologist arrived on site at 08:15 and left at 13:00.

Wednesday, August 30th, 2023

The ground disturbing activity of the day was pit excavation at the North and South UST Systems. An excavator, located within the pit, would scoop about 6 inches (in) of the exposed soil directly below the removed concrete foundation and present the soil to the archaeologist and hydrologist above on ground. Archaeologist would inspect the soil while the hydrologist collected samples. Excavation began at 10:00 and ended for the day at 13:00. Archaeologist arrived on site at 07:45 and ended at 13:15.

Stell
Star Forge Demolition

Monitor Log

North UST System

Soil Sample (SS)	Depth of SS	Cultural Material	Soil Description	Located	Photo Log
NT-SS-26	6.5 ft bgs	Negative	Brown, Red, and Gray fine silty sand, very loose, poorly sorted, damp. Many pieces of concrete present, some wood debris, some slag.	UST-26 Tank Floor	Figure 4
NT-SS-27	6.5 ft bgs	Negative	Brown, Red, and Gray fine silty sand, very loose, poorly sorted, damp, < 10% find sub-angular gravels throughout. Some concrete debris present, few roots. 1 transparent glass fragment, < 2 in, non-diagnostic.	UST-27 Tank Floor	Figure 5
NT-SS-28	6.5 ft bgs	Negative	Brown and gray fine sand, very loose, poorly sorted; Dark gray very fine silty sand, more cemented but still loose, well sorted; Very dark gray very fine sandy silt, very well sorted, some fine roots present; wood debris, concrete pieces, and slag throughout.	UST-28 Tank Floor	Figure 6
NT-SS-12	6.5 ft bgs	Negative	Brown and gray fine sand, very loose, poorly sorted; Trace orange-brown clayey silt, very well sorted, very cemented, wet. Some fine roots, no gravels or wood	UST-27 E Wall	Figure 7
NT-SS-13	6.5 ft bgs	Negative	Brown and gray fine sand, very loose, poorly sorted; Trace orange-brown clayey silt, very well sorted, very cemented, wet; Gray; Very dark gray sandy silt, well sorted, slightly cemented, has diesel smell. No gravels or wood present.	UST-29 E Wall	Figure 8
NT-SS-14	6.5 ft bgs	Negative	Gray and Gray-brown fine silty sand, loose, damp, poorly sorted, diesel smell. Slag present, no gravels or wood	UST-31 E Wall	Figure 9
NT-SS-20	6.5 ft bgs	Negative	Dark gray fine silty sand, loose, damp, poorly sorted, diesel smell (oil); Dark gray/Black sand, very poorly sorted loose, wet (oil), poorly sorted.	UST-31/32 W Wall	Figure 10
NT-SS-21	6.5 ft bgs	Negative	Very dark gray silty sand, fine, loose, poorly sorted, damp (no smell). Trace very fine yellow-brown silty sand, poorly sorted, dry. Trace concrete fragments.	UST-29/30 W Wall	Figure 11
NT-SS-22	6.5 ft bgs	Negative	Very dark gray fine silty sand, poorly sorted, loose, slight diesel smell. No wood or gravels present.	UST-28 W Wall	Figure 12
NT-SS-23	6.5 ft bgs	Negative	Brown sand, very poorly sorted, loose, damp; Very dark gray fine silty sand, loose, more damp; Slag present, no gravels or wood.	UST-26 W Wall	Figure 13

**Stell
Star Forge Demolition**

Soil Sample (SS)	Depth of SS	Cultural Material	Soil Description	Located	Photo Log
NT-SS-11	6.5 ft bgs	Negative	Very dark gray fine silty sand, poorly sorted, loose, damp; Very dark gray very fine sandy silt, poorly sorted, slightly cemented, wet, many fine roots (undisturbed/native Duwamish soil), trace charcoal present; Trace orange-brown coarse silty sand, dry, poorly sorted.	N Wall	Figure 14

South UST System

Soil Sample (SS)	Depth of SS	Cultural Material	Soil Description	Located	Photo Log
ST-SS-14	8.5 ft bgs	Negative	Dark gray sandy silt, wet, cemented, many roots and wood debris; Dark gray silty sand, damp, loose	ST South Wall	Figure 16
ST-SS-13	8.5 ft bgs	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose	ST Southeast Wall	Figure 17
ST-SS-12	8.5 ft bgs	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose. Many wooden pieces throughout	ST East Wall	Figure 18
ST-SS-11	8.5 ft bgs	Negative	Dark gray silty sand, poorly sorted, loose, damp; Orange-brown silty sand, more coarse, poorly sorted, dry, loose; Dark gray sandy silt, cemented, wet, poorly sorted. Many pieces of slag throughout, some wood and roots in the Dark gray sandy silt and silty sand – undisturbed organics	ST East Wall	Figure 19
ST-SS-10	8.5 ft bgs	Negative	Very dark gray sandy silt, cemented in very thin layers, well sorted, wet; Very dark gray clayey silt, very well sorted, wet	ST Northeast Wall	Figure 20
ST-SS-9	8.5 ft bgs	Negative	Gray-brown silty sand, poorly sorted loose, damp; Very dark gray sandy silt, very well sorted, cemented, wet. Wood debris throughout, some gravels and roots	ST North Wall	Figure 21

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Star Forge Demolition

Photo Log



Figure 1. Overview of North Tank (NT) at Start of Day (SOD), 8/29/23 Facing West



Figure 2. Overview of NT at End of Day, 8/29/23 Facing West

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Figure 3. NT Overview at SOD, 8/30/23, Facing West



Figure 5. NT-SS-27 Extracted Soil



Figure 4. NT-SS-26 Extracted Soil



Figure 6. NT-SS-28 Extracted Soil

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Figure 7 NT-SS-12 Extracted Soil



Figure 9. NT-SS-14 Extracted Soil



Figure 8. NT-SS-13 Extracted Soil



Figure 10. NT-SS-20 Extracted Soil

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Figure 11. NT-SS-21 Extracted Soil



Figure 13. NT-SS-23 Extracted Soil



Figure 12. NT-SS-22 Extracted Soil



Figure 14. NT-11 Extracted Soil

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Star Forge Demolition



Figure 15. South Tank (ST) Overview, facing South



Figure 17. ST-SS-13 Extracted Soil



Figure 16. ST-SS-14 Extracted Soil



Figure 18. ST-SS-12 Extracted Soil

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Star Forge Demolition



Figure 19. ST-SS-11 Extracted Soil



Figure 21. ST-SS-9 Extracted Soil



Figure 20. ST-SS-10 Extracted Soil

Stell Star Forge Demolition

Monitor: Jordan Cooper

Date: October 11, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Earthwork on this day included the tearing apart of a concrete building foundation, removal of the concrete, and soil scrape for sampling. The maximum depth reached by the excavator that was also monitored was no more than 40 centimeters below surface (cmbs). The sediment observed was a yellow-brown silty sand, with modern or nondiagnostic debris throughout, including metal rebar, concrete, and decolorized glass shards.

Monday, August 28th, 2023

Archaeologist arrived on site at 8:00 am and left at 2:30 pm.

Upon arriving, excavation and sampling of the demolished Aluminum building began. Investigatory work to determine pipe routing beneath the Aluminum building halted sampling work. The ground disturbing activity of the day was predominately removal the concrete foundation of the demolished Aluminum building. The archaeologist inspected the soil in between samples which were collected from no more than one inch below the surface. **No cultural resources were identified during the process.**

Stell
Star Forge Demolition

Photo Log



Figure 1. Overview start of day, facing North.

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Figure 2. Soil removed from under foundation near the northern wall of the Aluminum building.

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Figure 3. Start of the western wall of the Aluminum building foundation excavation.

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Figure 4. Western wall of the Aluminum building foundation.

Stell
Star Forge Demolition



Figure 5. Western wall of Aluminum building foundation with soil pile.

Stell
Star Forge Demolition



Figure 6. Eastern wall of Aluminum building excavation during pipe routing work.

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Figure 7. Soil removed during excavation and sampling.

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Figure 8. Pipes excavated from roughly 20 cm below surface.

Stell
Star Forge Demolition



Figure 9. End of day overview.

Stell Star Forge Demolition

Monitor: Dana Chandler

Date: October 24, 2023

Provenience:

Location: 8531 East Marginal Way South

Excavation Summary:

Visibility: Good

NRHP eligible: Y N

Summary (including daily excavation goal/achievement of crew, soil observations, cultural material observed and context, and additional comments):

Earthwork on this day included the tearing apart of a building foundation, asphalt slab, and a concrete slab, removal of the concrete, and soil scrape for sampling. The maximum depth reached by the excavator was no more than 61 centimeters below surface (cmbs). The sediment observed was yellow-brown silty sand, with some bands of grey silt. Debris from the building included metal rebar, concrete, metal pipes, and wood planks.

Tuesday, October 24th, 2023

Archaeologist arrived on site at 0800 and excavation began promptly. The ground disturbing activity of the day was excavation of a building foundation and sampling of the soil. An excavator broke apart and removed the concrete foundation, asphalt slab, and concrete slab. The archaeologist inspected the soil in between truckloads of concrete being hauled away. After the concrete was hauled away, soil samples were collected from no more than three inches below the surface. A total of 6 soil samples were collected. Some debris was observed by the archaeologist, including metal pipes and metal rebar. **No cultural resources were identified during the process.** Work ceased at 1030.

Stell
Star Forge Demolition

Photo Log



Figure 1. Overview start of day, view west.

Stell
Star Forge Demolition



Figure 2. Overview EOD, view northwest.

Stell
Star Forge Demolition



Figure 3. Overview EOD, view southwest.