UST Site Assessment and Independent Cleanup Action Report

1001 Minor Avenue Property

Nash-Holland 1001 Minor Investors, LLC

Project Number: 60536280

February 5, 2018

Prepared for:

Nash-Holland 1001 Minor Investors, LLC 1000 Dexter Ave North Suite 201 Seattle, WA 98109

Prepared by:

AECOM 1111 Third Avenue Suite 1600 Seattle, WA 98101 aecom.com

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AECOM 1111 Third Avenue Suite 1600 Seattle, WA 98101 USA aecom.com

February 5, 2018

Mr. Nick Hoffman Holland Partner Group 1000 Dexter Ave North Suite 201 Seattle, WA 98109

AECOM Project Number: 60533834

Dear Mr. Hoffman,

AECOM is pleased to present our UST Site Assessment and Independent Cleanup Action Report for the 1001 Minor Avenue Project located at 1001 Minor Avenue (1122 Madison Street) in Seattle, WA. This project was conducted as an independent cleanup action in conformance with the State of Washington's Model Toxics Control Act (MTCA, Chapter 173-340 WAC) and Underground Storage Tanks Regulations (Chapter 173-360 WAC).

On behalf of Nash-Holland 1001 Minor Investors, LLC (Nash-Holland) this report is being submitted under the Petroleum Technical Assistance Program (PTAP) of the Pollution Liability Insurance Agency (PLIA) in order to obtain a written opinion regarding the cleanup action completed during the site redevelopment. Nash-Holland will be completing the online PTAP Application Form and a copy of this report will be submitted with the application.

This report summarizes the actions taken to remove four historical underground storage tanks. The report includes the field screening and sampling methodology, field observations, laboratory analysis results, disposal documentation, and our conclusions. This cleanup action was performed in accordance with our Media Management Plan and Field Monitoring Proposal to Nash-Holland and Holland Partner Group dated February 8, 2017 and the report was prepared in conformance with WAC 173-340-840 and PLIA's Petroleum Technical Assistance Program Guidance (PLIA, 2017).

Please contact us at (206) 438-2700 if you have any questions or require additional information.

Yours sincerely,

DR1

David Raubvogel Senior Geologist, LHG AECOM

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Laurence Brown Staff Geologist AECOM

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List of Acronyms and Abbreviations

bgs BTEX CDF	below ground surface benzene, toluene, ethylbenzene and xylenes control density fill
COC	chain of custody
Dx	diesel-extended
Ecology	Washington Department of Ecology
ESA	Environmental Site Assessment
Gx	gasoline-extended
Hos	Hos Bros Construction
mg/kg	milligrams per killogram
MSL	mean sea level
MTCA	State of Washington Model Toxics Control Act
Nash-Holland	Nash-Holland 1001 Minor Investors, LLC
NFA	No Further Action
NWTPH	Northwest Total Petroleum Hydrocarbons
PID	photoionization detector
PLIA	Washington State Pollution Liability Insurance Program
PTAP	Petroleum Technical Assistance Program
RECs	Recognized Environmental Conditions
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volitile organic compounds
WAC	Washington Administrative Code

1. Introduction

On behalf of Nash-Holland 1001 Minor Investors,LLC (Nash-Holland), AECOM has prepared this report presenting the results of the UST Site Assessment and Independent Cleanup Action at the 1001 Minor Avenue property in Seattle, WA (Site). The assessment included oversight of decommissioning four underground storage tanks (UST), excavation and removal of petroleum impacted soils, and performance of confirmational soil sampling.

The UST decommissioning cleanup action, and confirmation soil sampling were conducted consistent with the applicable provisions of the State of Washington's Model Toxics Control Act (MTCA, WAC 173-340) and Underground Storage Tanks Regulations (WAC 173-360), the Washington Department of Ecology's (Ecology's) *Guidance for Remediation of Petroleum Contaminated Soils*, (Ecology, 2011) and AECOM's Media Management Plan (MMP) dated March 28, 2017.

UST decommissioning and removal was completed by FILCO Company, Inc. (FILCO) of Seattle, WA with excavation assistance by Hos Bros Construction (Hos) of Woodinville, Washington. Decommissioning activities were performed in conformance with Ecology and the City of Seattle requirements. AECOM performed site assessment activities, monitoring of the excavation and removal of the USTs, and evaluation of soils within the UST excavations. This report documents the cleanup action and associated field observations, laboratory analytical results, and soil disposal.

1.1 Site Description and Setting

1.1.1 Site Location

The Site is located at the northwestern corner of the Madison Street and Minor Avenue intersection at 1001 Minor Avenue in Seattle, King County, Washington (Figure 1). The Site is bounded to the east by Minor Avenue, to the south by Madison Street; to the west by the University Club; and to the north by the Decatur and Gainsborough Apartment buildings (Figure 2).

1.1.2 Site Description and Setting

The Site consists of a 0.35-acre parcel (Parcel No. 197820-0610) that was developed with an approximately 7,600square-foot masonry building constructed in 1956. Paved parking was located north and west of the building that was previously occupied by a McDonald's restaurant. The property legal description is Lots 6 & 7, Blk 118, A.A. Denny's Broadway.

The Site is located in the southwest quarter of Section 32, Township 25 North, Range 4 East. The elevation of the Site ranges from approximately 335 to 334 feet above mean sea level (msl) with a slight southwesterly slope. The nearest surface water body is Elliott Bay, which is approximately 4,500 feet to the southwest.

1.1.3 Geology and Site Hydrogeology

The Site is underlain by a fill consisting of brown sand to silty sands approximately 5 feet in thickness (Terra Associates, 2015). The fill is underlain by native soils consisting of Vashon glacial recessional outwash deposits characterized by stratified sand and gravels with silty sand and silt (USGS 2005). The outwash was medium dense to dense and ranged from grey to light gray fine to medium sands. Gravel and cobble layers were evident from approximately 38 feet to 55 feet below ground surface (bgs). Groundwater was not encountered in any of the Terra Associates geotechnical borings that were completed to 61.5 feet bgs. A monitoring well installed to a depth of 75 feet bgs on the adjacent property to the east did not encounter groundwater (URS, 2014).

2. **Property Development and History**

2.1 Site History and Prior Environmental Investigations

A Phase I ESA was conducted for the Site as part of acquisition due diligence (URS 2014). The Phase I ESA historical research indicated that the People's National Bank occupied the property from the mid-1950's through 1970. The building was then converted into the Rainbow Ambulance Service, and building plans for this facility (see Appendix A) indicated that two USTs were installed, a 2,000-gallon gasoline and a 300-gallon waste oil. The USTs were located west and north of the building, respectively as shown on Figure 2. The gas pump was located between the 2,000-gallon UST and the building. No information was identified regarding the removal of these USTs (URS, 2014). In the early 1980's, the building was identified as the McDonald's restaurant. Adjacent properties included commercial and residential uses such as apartment buildings. The current site vicinity is shown on Figure 2. The USTs at the Site were identified as recognized environmental conditions.

AECOM performed a Phase II ESA which included a geophysical survey and soil borings in 2015 (AECOM, 2015). The geophysical survey was completed within the parking lot north and west of the McDonald's building. Anomalies were identified which were inferred to be USTs. Based on historical site information, three of the anomalies appeared to coincide with the locations of the suspect waste oil and gasoline USTs (Figure 3). An additional anomaly was identified in the southwestern portion of the Site which did not coincide with any historical features or known tank locations. A number of small GPR anomalies were identified and the nature of these apparent objects was not known.

Five Geoprobe® borings (SB-1 through SB-5 (completed to depths ranging from 4 to 18 feet) and four hollow stem auger borings (B-1 through B-3 to 61.5 feet in depth and B-4 to 16.5 feet in depth) were advanced to obtain both environmental and geotechnical information (AECOM, 2015) .The results of the geotechnical information obtained during the Phase II ESA were presented in a separate report prepared by Terra Associates (TA, 2015). Soil borings completed adjacent to the suspected UST locations (Figure 3) did not detect evidence of petroleum contamination. However, low concentrations of heavy oil range petroleum (49.7 mg/kg to 111 mg/kg) were identified in shallow soils in the general vicinity of the suspected waste oil UST. These low level detections were thought to be associated with *de minimis* releases from vehicular traffic and parking in this area. VOCs were not detected in the soil samples. Based on these results, the petroleum hydrocarbon-affected soils noted north of the McDonald's building were anticipated to fall within Ecology's Soil Category 2 for best management practices related to reuse and disposal of Petroleum Contaminated Soils (Ecology 2016).

AECOM advised that the geophysical anomalies be assessed during property redevelopment (e.g., test pits) and a Construction Contingency/Environmental Media Management Plan (EMMP) be prepared to address the management of environmental issues that could be encountered at the Site during construction earthwork.

The EMMP was subsequently prepared and included information on identification, removal, temporary storage, transportation, and disposal of contaminated media (specifically petroleum contaminated soils) encountered during the building construction earthwork. The plan also contained contingency measures to address decommissioning of any USTs discovered during the redevelopment of the Site (AECOM, 2017a).

2.2 Site Development

NASH-Holland is redeveloping the Site into a 17-story commercial/residential building with six levels of underground parking. Redevelopment activities included demolition of the existing McDonald's building and site features, mass excavation of the Site to install a permanent lot-line to lot-line soldier pile, lagging shoring system (north and east walls) including soil nail and shotcrete walls (south and west walls), and construction of the new building. The total depth of the new building foundation ranged between 53 to 45 feet bgs (approximately elevations 282 to 290 feet above MSL)

Prior to demolition of the existing McDonalds building, AECOM conducted a RBM assessment that included the interior, exterior, and roof of the building. The building was assessed for: asbestos-containing materials (ACM); assumed asbestos-containing materials; lead-containing coatings (paints); mercury-containing light tubes, switches,

and thermostats; and suspected Polychlorinated Byphenols (PCB)-containing sources (AECOM, 2017b). The building abatement and site demolition activities were performed by Rhine Demolition of Tacoma, WA in April 2017.

3. UST Decommissioning and Cleanup Actions

3.1 Cleanup Levels and Terrestrial Ecological Evaluation

The UST removals and cleanup action implemented during the construction of the 1001 Minor Avenue development were conducted in accordance with Ecology MTCA and UST regulations, Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*, (Ecology, 2016) and AECOM Environmental Media Management Plan (AECOM, 2017a). Based on the nature of the contamination present and the intended future use of the property, MTCA Method A soil cleanup levels were utilized.

In accordance with MTCA regulations, a Terrestrial Ecological Evaluation (TEE) was completed and the site qualified for an exclusion from further evaluation using the criteria in WAC 173-340-7491. The completed TEE is provided in Appendix B.

3.2 Scope of UST Removal and Cleanup Actions

The UST Site Assessment and Independent Cleanup Action involved documenting the decommissioning of USTs located on the Site, and identifying and removing soils potentially impacted by releases from the USTs or other historical operations. The scope of work included:

- · Filing the required Ecology tank closure notification and contacting the City of Seattle Fire Department.
- Conducting the removal and disposal of four USTs: (a) an approximately 1,700-gallon gasoline (UST-A); (b) a 300 gallon waste oil (UST-B); (c) a 800 gallon heating oil (UST-C); and (d) an approximately 2,800 Bunker C fuel UST (UST-D). These four USTs are shown on Figure 4.
- Pumping, rinsing, removal, and transportation of the USTs to a licensed disposal facility in conformance with Ecology UST regulations (WAC 173-360).
- Excavation, handling, transportation, and disposal of petroleum impacted soils at a Subtitle D landfill (Republic Services Roosevelt Regional Landfill)

AECOM was responsible for the following scope of services:

- · Monitoring the removal of the USTs and performing the UST Site Assessment.
- Monitoring the contractor (Hos) during the excavation and removal of potentially impacted soils from the Site.
- · Documenting the condition of soils exposed in the walls and floor of the excavation.
- · Collecting post-excavation confirmation soil samples.
- · Collecting of soil samples for waste characterization.
- Submitting soil samples to Fremont Analytical, an Ecology-accredited analytical laboratory, to be analyzed for gasoline and diesel range petroleum hydrocarbons by NWTPH-diesel extended (Dx), and volatile organic compounds (benzene, toluene, ethylbenzene and total xylenes (BTEX)) by EPA Method 8260C.
- Preparation of this report summarizing the field activities, analytical results, and conclusions regarding tank decommissioning.

3.3 Field Monitoring, Waste Characterization and Post Excavation Sampling Procedures

AECOM performed UST and soil removal field monitoring between May 4 and July 11, 2017. The locations of the decommissioned USTs and extent of petroleum impacted soils are shown on Figure 4. The field monitoring consisted

of screening soil for the presence of petroleum hydrocarbons and conducting post-excavation soil sampling. AECOM personnel described the subsurface materials encountered in the excavation and field screened soil samples for organic vapors using a photoionization detector (PID). Evidence of staining, discoloration, odors, or other relevant factors indicative of petroleum hydrocarbon contamination in the exposed soils were noted.

When field screening indicated that the excavation base and sidewalls did not contain petroleum contaminated soil (PCS), post-excavation soil samples were collected to confirm that the PCS had been adequately removed. The samples were collected directly from the undisturbed sidewalls and floor of the excavation using the excavator bucket. AECOM field personnel used laboratory provided disposable sampling syringes and new disposable nitrile gloves to collect soil from the bucket and transfer soil into bottle ware. A Washington State-registered UST site assessor was on-site during the tank removal. Photographs taken during the UST removal and soil excavation program are provided in Appendix C.

3.4 Sample Handling, Sample Designations and Analyses

The samples designated for analyses were placed in laboratory-supplied glassware. Samples were labeled with a unique sample number, date, and time of collection. Sealed samples were stored in an ice chest chilled to 4 degrees Celsius until delivered to the analytical laboratory. Chain-of-custody (COC) forms were used to document sample integrity. Soil samples were submitted to an Ecology-accredited laboratory, Fremont Analytical of Seattle, for analysis of diesel range petroleum hydrocarbons by NWTPH-Dx, gasoline range petroleum hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8260C. The analytical data was reviewed and validated by an AECOM project chemist and no data usability issues were identified. The laboratory analytical reports are provided in Appendix D.

4. Findings

4.1 UST Decommissioning and Post Excavation Soil Sampling Results

During the excavation of soils for the building foundation, two suspected and two previously unknown USTs were decommissioned by Filco. The City of Seattle Fire Department and a certified Marine Chemist were on site during the UST decommissioning activities. The four tanks were referred to as: UST-A (1700 gallon gasoline); UST-B (300 gallon waste oil); UST-C (800 gallon heating oil) and UST-D (2,800 gallon bunker oil) and their locations are shown on Figure 4. During the soil nail drilling performed on the west side of the site, a previously unknown heating oil UST was encountered beneath the adjacent University Club property. The UST was decommissioned in place and the decommissioning information is provided under a separate cover (AECOM, 2017c). A summary of each tank removal and soil sampling results are provided below.

UST A: Decommissioned on May 8, 2017. UST A was located near the northwest corner of the former McDonald's building. UST A was approximately 8 feet long by 6 feet in diameter (approximately 1,700 gallon capacity) and was constructed of riveted steel. Based on the historical information, this UST was suspected to have stored gasoline. The top of the UST was encountered at approximately 4 to 5 feet bgs. The UST was found to be filled with sand and had been decommissioned in place. The sand within the UST was removed to allow the tank to be removed from the ground. Sand recovered from the tank did not exhibit indications of petroleum impacts. The UST appeared to be in good condition, with no holes or punctures evident. Marine Vacuum Service (Mar-Vac) under the direction of FILCO, purged the tank using Vac truck equipment and Hos removed the UST from the excavation. No piping related to the UST was recovered during the decommissioning and tank excavation process. Contamination was not evident in soils within base or sidewalls of the UST excavation or around the piping removed. Two sidewall samples (UST A-SW1 and UST A-SW2) and one bottom (UST A-B1) confirmation soil sample were collected from the UST A excavation area. Petroleum hydrocarbons and BTEX were not detected in the confirmation soil samples (Table 2).

UST B: Decommissioned on May 4, 2017. UST B was located along the northern property boundary of the Site. UST B was approximately 3 feet in diameter and 5 feet long (approximately 300 gallon capacity). Based on historical information, this UST likely stored waste oil. No obvious holes or punctures were identified on the UST which was constructed of steel. The UST was previously decommissioned in place, and was completely filled with pea gravel. The top of the UST was noted at approximately five feet bgs. Contamination was not evident along the base and sides of the UST excavation. Mar-Vac under the direction of FILCO, removed the pea gravel fill using Vac truck equipment. Following removal of the pea gravel, Hos removed the tank from the excavation area. Piping related to the UST was also removed during the excavation process. Initial field screening at the time of the UST decommissioning indicated no contamination present in soils surrounding the UST or related piping and thus, no confirmation soil samples were collected at that time. On June 8th, AECOM returned to the Site when impacted soils were encountered during excavation in the area of the UST between approximately soldier piles N9 and N11 at depths of approximately 8 feet to 13 feet bgs. Grey discoloration was observed and hydrocarbon odors were noted within stockpiled soils generated from the soil removal in this area. Two composite samples SP-06082017-2 and SP-06082017-3 were collected from the stockpiled soils and analyzed for gasoline and diesel range petroleum hydrocarbons as well as BTEX constituents. Diesel-Range petroleum hydrocarbons were detected in sample SP-06082017-2 at a concentration of 77.5 mg/kg, below the MTCA cleanup level of 2,000 mg/kg (Table 1). Toluene was detected in sample SP-06082017-3 at a concentration of 0.0223 mg/kg, below the MTCA cleanup level of 7.0 mg/kg. All other constituents were not detected above laboratory reporting limits. This portion of the foundation excavation extends approximately 32 feet below the base of the petroleum impacts observed relating to UST B.

UST C: Decommissioned on May 12, 2017. UST C was located at the northeast corner of the former McDonald's building (Figure 4). UST C was approximately 8 feet long by 4 feet in diameter (800 gallon capacity) and was constructed of steel. Based on available information, UST C was used for the storage of heating oil. The top of the UST was encountered at approximately 4 feet bgs. The UST appeared to be in good condition, with no holes or punctures. This UST was previously decommissioned in place and was filled with pea gravel and sand. Approximately 50 gallons of water was observed within the tank and the water was noted to have a slight sheen. Contamination was not evident in the soils below the base or sidewalls of the UST excavation. Hos removed the tank from the excavation area. No piping related to the UST was recovered during the decommissioning. Two sidewall samples (USTC-SW1 and USTC-SW2) and one bottom (USTC-B1) confirmation soil sample were collected from the UST C excavation. Gasoline, diesel and heavy oil-range petroleum hydrocarbons, and volatile organic compounds were not detected in any of the confirmation soil samples collected (Table 2). The foundation excavation was completed approximately 37 feet of soil below the base of UST C.

UST D: Decommissioned on May 18, 2017. UST D was located in the central portion of the site and measured approximately 16 feet in length by 5.5 feet in diameter (2,800 gallon capacity). The UST was constructed of riveted steel and apparently stored Bunker C oil. The top of the UST was encountered at approximately 5 feet bgs and appeared to be in good condition, with no holes or punctures. Approximately 930 gallons of Bunker C oil was noted in the tank. Mar-Vac, under the direction of FILCO, removed the oil using a vacuum truck. Following purging, Hos removed the tank from the excavation area. No piping related to the UST was recovered during the decommissioning. Two sidewall samples (USTD-SW1 and USTD-SW2) and one bottom (USTD-B1 confirmation soil sample were collected from the UST D excavation. Gasoline and diesel-range petroleum hydrocarbons, and volatile organic compounds were not detected in any of the confirmation soils samples collected from the UST excavation (Table 2). Approximately 43 vertical feet of soil was removed below the base of UST D as part of the site mass excavation program.

A copy of the Site Check/Site Assessment Checklist for USTs discovered at the site, UST decommissioning permits and letters of certification, as well as waste disposal documentation are provided in Appendix E.

4.2 Other Petroleum Affected Soil Excavation Areas and Post Excavation Soil Sampling Results

4.2.1 Concrete Trough

On May 12, 2017, PCS was encountered during the foundation mass excavation in the northeast corner of the Site (Figure 4). The petroleum impacts appeared to be limited to soils immediately above a concrete trough (CT) structure. The PCS was noted as a grey sandy silt and gravel with a slight petroleum odor. Field screening of this soil with a PID detected organic vapors at a concentration of 1.2 ppm. A test pit was completed adjacent to the CT structure and no contamination was noted. The small volume of PCS from this area (approximately 10 cubic yards) was segregated and stockpiled on plastic sheeting. The stockpiled PCS (CT-Stockpile, Table 1) had a slight petroleum odor and PID reading of 3.5 ppm. A sample collected from the stockpiled PCS (CT-Stockpile) detected heavy oil range petroleum hydrocarbons at a concentration of 2,190 mg/kg. On May 15 the CT structure was removed and no additional field evidence of contamination was noted beneath the CT area. AECOM collected a soil

sample from the base of the CT excavation (CT-Bottom, Table 2). A concentration of heavy oil range petroleum (94.5 mg/kg) was detected in the sample, well below the MTCA Method A Cleanup Level of 2,000 mg/kg. Gasoline and diesel range petroleum and BTEX constituents were not detected in the CT-Bottom sample. The foundation excavation was extended approximately 37 feet below the bottom of the CT.

4.2.2 University Club UST

On May 30, 2017, during the installation of the foundation elements for the new Site construction, Malcolm Drilling (Malcolm), noted a void during the drilling of a tieback along the west side of the Site. The advancement of the tieback boring was immediately stopped and upon further assessment, the void was identified as a UST. The UST was located on the University Club property (UC-UST) as shown on Figures 4 and 5. After encountering the void, the tieback rods were removed from the boring and a stick was used to probe the hole in the tank. A black petroleum product was identified at the end of the stick. This material was sampled and analysis indicated it was a heating oil product. NASH-Holland subsequently notified the University Club of the situation, while AECOM notified Mr. Drew Imke of Ecology's Northwest Regional Office UST Program regarding the discovery of the tank (Initial Report) and the plan to decommission the UST in place. The earthwork contractor (Hos) exposed the east side of the UST, which was found to be approximately 5 feet in diameter. A small hole created by the tieback drill was evident several inches above the bottom of the tank (see photographs in Appendix C). Approximately 6-inches of product and water were noted in the tank. On June 6, 2017, AECOM submitted the Ecology 30-Day Notice for USTs outlining the intent to close the tank in place. Mr. Drew Imke of Ecology provided verbal approval of the in place closure plans. Soil samples were collected directly beneath the puncture in the tank (Figure 4) and were analyzed for petroleum hydrocarbons. Soil samples UC-UST#1 and UC-UST#2 (Table 2) detected diesel-range petroleum hydrocarbons at concentrations of 150 and 547 mg/kg, respectively, which are below MTCA Method A soil cleanup level of 2,000 mg/kg. Gasoline range petroleum hydrocarbons and BTEX were not detected in the soils samples.

Filco performed the in place decommissioning of this tank on June 9, 2017. The UST measured approximately 10 feet in length and 5 feet in diameter (approximately 1,000 gallon capacity) and was constructed of steel. The top of the UST was encountered at approximately 3 feet bgs. The exterior of the UST was pitted, but no corrosion holes were evident in the exposed portions of the tank. A small volume of petroleum impacted soil was noted adjacent to the puncture in the tank, and this material was removed by Hos and disposed of at a Republic Services Subtitle D Landfill. Following cleaning, the UST was filled with control density fill (CDF) and covered with soil.

On June 22, 2017, AECOM evaluated soils along the western side of the Site adjacent to University Club. (Figure 4). Petroleum odors had been noted by Hos during excavation of soils adjacent to the University Club at an elevation of approximately 327 feet msl (approximately 6 feet bgs). Hos stated that the horizontal extent of the soils exhibiting petroleum odor was approximately 10 feet x 15 feet in area. At the time of AECOM's field observations, all of the potentially impacted soils in the area of the University Club UST had been excavated and stockpiled by Hos (Appendix C). AECOM collected two samples from this stockpile (Stockpile-062217-1 and Stockpile-062217-2). Petroleum hydrocarbons and BTEX constituents were not detected in either stockpile sample above laboratory reporting limits. AECOM evaluated the base of the excavation in the area where the potentially impacted soils had been removed. No evidence of petroleum impacts were noted within the excavated area. The foundation excavation was completed another 47 feet below this area. Additional information regarding the University Club UST is provided in a separate report (AECOM, 2017c). On July 11, 2017, AECOM visited the Site to evaluate soils within the southeast corner. Hos noted petroleum like odor in soils during excavation of the southeastern corner of the Site from approximately 20 to 25 feet bgs (Figure 4). AECOM evaluated the base and sidewalls of the excavated area as well as stockpiled soil generated from the excavation. A slight petroleum odor was noted in stockpiled soils, but no evidence of petroleum impacts were noted within the excavation. Two composite samples were collected from the stockpiled soil, Stockpile-071117-1 and Stockpile-071117-2. Field screening PID measurements were below 1 ppm. Petroleum hydrocarbons and BTEX were not detected in either sample above laboratory reporting limits. Low levels of petroleum impacted soils were identified during the Phase II Investigation (AECOM, 2015). Based on field observations and soil analytical data collected during the property redevelopment mass excavation program, all areas of petroleum impacts identified in the 2015 Phase II Investigation were limited in extent and were fully addressed during development through direct excavation and over-excavation.

All potentially impacted soils generated at the Site were managed by Hos and hauled from the Site for disposal at the Republic Services Subtitle D Roosevelt Regional landfill located in Bickleton, WA. Refer to Appendix E for soil disposal documentation.

5. Conclusions

Based on the findings of the AECOM UST Site Assessment and Independent Cleanup Action implemented at the 1001 Minor Avenue property, AECOM has reached the following conclusions:

- A total of four USTs were removed as part of Site redevelopment. Historical research during the Phase I ESA (URS, 2014) and subsequent geophysical survey (AECOM, 2016) identified two tanks (UST-A and UST-B) existing at the Site. Two unknown tanks (UST-C and UST-D) were also encountered during the foundation earthwork. Three of the tanks (UST-A, UST-B and UST-C) had been decommissioned in place and were filled with pea gravel. UST-D was the only tank found to contain petroleum product (Bunker C). All of the USTs were decommissioned by Filco, an Ecology-licensed UST decommissioning firm in accordance with State of Washington UST regulations. The USTs were removed in May 2017.
- No evidence of any historical releases were noted in the excavation base or sidewalls of USTs A, C, or D and these USTs were properly decommissioned and removed from the Site. Petroleum impacts were noted in soils in the area below UST B situated along the northern property boundary. The UST appeared to be intact and the contamination was likely associated with the former tank piping and/or overfills. Field screening indicated that the contamination extended to approximately 13 feet bgs. All impacted soils were removed, with excavation was extended approximately 32 feet below the bottom of UST B.
- A total of 852.53 tons of petroleum impacted soils were sent to the Republic Services Subtitle D Roosevelt Regional landfill for offsite disposal following excavation and removal of the four USTs from the Site. The liquid wastes were treated at Emerald Services and the USTs were sent for recycling by Filco.
- The discovery and decommissioning of the UST encountered on the University Club property (UC-UST) during the drilling of soil nails is detailed in a separate report (AECOM, 2017c). The tank was decommissioned in place by Filco in conformance with Ecology UST regulations and Seattle Fire Department requirements. The tanks was cleaned and filled with CDF. Two soil samples collected beneath the tank detected diesel range petroleum hydrocarbons below applicable the MTCA Method A cleanup level. Gasoline range petroleum hydrocarbons and BTEX were not detected in these samples. Petroleum impacted soils that appear to be related to UC-UST encountered on the Site were removed to an elevation of approximately 327 feet above MSL. Based on confirmation soil sampling data, no residual contamination above MTCA Method A Cleanup Levels remains along the western sidewall of the Site.
- The finished elevation of the mass excavation of the Site during redevelopment ranged from 43 to 55 feet bgs, well below the depths of the petroleum impacted soils, the majority of which were detected between 5 to 13 feet bgs (elevation 330 to 322 feet MSL)
- Soils potentially impacted with petroleum hydrocarbons noted during mass excavation activities within the southeast corner of the site from approximately 20 to 25 feet bgs were removed in July 2017, although no petroleum hydrocarbons were detected above laboratory detection limits in stockpile samples collected from this area (Stockpile -071117-1 and Stockpile-071117-2; Table 1).
- The concrete trough discovered in the northeastern portion of the site had a small quantity of petroleum impacts within the trough. The feature was removed and the soils adjacent to and beneath the concrete trough, which were not impacted, were then over-excavated.
- Analytical results for confirmation soil samples collected from the excavation base and sidewalls of UST's A, C, and D were non-detect for gasoline and diesel-range petroleum hydrocarbons and BTEX. The two composite samples (SP-06082017-2 and SP-06082017-3) collected from the stockpiled soils that were removed from beneath UST B detected low concentrations of diesel-range petroleum hydrocarbons in one sample (SP-06082017-2; 77.5 mg/kg)) and low concentrations of toluene in one sample (SP-06082017-3; 0.0223 mg/kg) /kg. All other constituents were not detected above laboratory reporting limits.
- There was no indication of any contamination or impacts migrating from the Site onto adjacent properties or beneath adjacent rights-of-way. Any petroleum impacted soils beneath the University Club property related to the University Club UST represents a separate issue that is unrelated to the Site.

Based on the findings of this investigation and the performance of excavation activities during Site redevelopment, it is our opinion that no further action (NFA) is necessary at the Site. We therefore request issuance of an Unrestricted NFA for the Site.

6. References

- AECOM, 2015. Phase II Environmental Site Assessment -1001 Minor Avenue Property, Seattle, WA. August 10.
- _____, 2017a. Environmental Media Management Plan, 1001 Minor Avenue Property, Seattle, WA. March 28.
- _____, 2017b. Regulated Building Materials Assessment Report,1001 Minor Ave Property, Seattle, WA. March 6.
- _____, 2017c. UST Site Assessment Report, University Club, 1004 Boren Avenue, Seattle, WA. June 28.
- PLIA, 2017. Petroleum Technical Assistance Program Guidance. Publication No. 02-2017-19.
- Terra Associates, Inc., 2015. Geotechnical Report 1001 Minor; Madison Street and Minor Avenue. October 23.
- Terra Associates. 2015. Geotechnical Report 1001 Minor; Madison Street and Minor Avenue. October 23.
- URS, 2014. Phase I Environmental Site Assessment, 1122 Madison Street Property, Seattle, WA. January 6.
- Washington State Department of Ecology, 2016. *Guidance for Remediation of Petroleum Contaminated Sites*. Publication No. 10-09-057; revised June.

Washington State Department of Ecology, 1996. http://www.ecy.wa.gov/programs/tcp/ust-lust/1closure.pdf

UST Site Assessment and Independent Cleanup Action Report

Tables

Table 1 Summary of Soil Stockpile Analytical Results Holland - 1001 Minor Ave Seattle, Washington

		TPH (mg/kg)			VOCs (mg/kg)			
Sample ID	Sample Date	Gasoline-Range	Diesel-Range	Heavy Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes
CT - Stockpile	5/15/2017	3.82 U	21.2 U	2,190	0.0153 U	0.0153 U	0.0229 U	0.0153 U
SP-1	6/2/2017	4.91 U	808	46.7 U	0.0197 U	0.0197 U	0.0295 U	0.0696
SP-2	6/2/2017	5.32 U	584	50.5 U	0.0213 U	0.0213 U	0.0319 U	0.0436
SP-06082017-2	6/8/2017	2.84 U	77.5 J	51.8 U	0.0114 U	0.0114 U	0.0170 U	0.0114 U
SP-06082017-3	6/8/2017	2.39 U	20.6 U	51.5 U	0.00956 U	0.0223	0.0143 U	0.00956 U
Stockpile-062217-1	6/22/2017	5.44 U	19.7 U	49.3 U	0.0217 U	0.0217 U	0.0326 U	0.0217 U
Stockpile-062217-2	6/22/2017	5.38 U	21.1 U	52.8 U	0.0215 U	0.0215 U	0.0323 U	0.0215 U
Stockpile-071117-1	7/11/2017	6.66 U	20.2 U	50.4 U	0.0266 U	0.0266 U	0.0400 U	0.0266 U
Stockpile-071117-2	7/11/2017	6.10 U	20.5 U	51.3 U	0.0244 U	0.0244 U	0.0366 U	0.0244 U
MTCA Method A Soi	il Cleanup Level	30 / 100 ^a	2,000	2,000	0.03	7.0	6.0	9.0

Notes:

Values in **bold** font indicate that the result reported meets or exceeds the most current MTCA level based on the Ecology website.

Model Toxics Control Act (MTCA) Cleanup Regulation, WAC 173-340. MTCA Method A values are from Ecology website CLARC tables downloaded August 2015 (https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx).

J - estimated value

mg/kg - milligram per kilogram

TPH - total petroleum hydrocarbon

U - compound was analyzed for but not detected above the reporting limit shown.

VOC - volatile organic compounds

^a The MTCA Method A soil screening level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture.

The MTCA Method A screening level for all other gasoline mixtures is 30 mg/kg.

Table 2Summary of Soil Post-excavation Analytical ResultsHolland - 1001 Minor AveSeattle, Washington

		TPH (mg/kg)			VOCs (mg/kg)			
Sample ID	Sample Date	Gasoline-Range	Diesel-Range	Heavy Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes
UST A B-1	5/8/2017	5.53 U	20.0 U	49.9 U	0.0221 U	0.0221 U	0.0332 U	0.0221 U
UST A - SW 1	5/8/2017	5.88 U	19.9 U	49.9 U	0.0235 U	0.0235 U	0.0353 U	0.0235 U
UST A - SW 2	5/8/2017	5.47 U	19.0 U	47.5 U	0.0219 U	0.0219 U	0.0328 U	0.0219 U
UST C - SW 1	5/12/2017	4.36 U	20.5 U	51.3 U	0.0174 U	0.0174 U	0.0262 U	0.0174 U
UST C - SW 2	5/12/2017	4.54 U	21.6 U	54.1 U	0.0181 U	0.0181 U	0.0272 U	0.0181 U
UST C - B1	5/12/2017	4.55 U	20.9 U	52.3 U	0.0182 U	0.0182 U	0.0273 U	0.0182 U
CT - Bottom	5/15/2017	3.85 U	22.7 U	94.5	0.0154 U	0.0154 U	0.0231 U	0.0154 U
UST D-SW1	5/18/2017	5.28 U	21.6 U	53.9 U	0.0211 U	0.0211 U	0.0317 U	0.0211 U
UST D-SW2	5/18/2017	5.19 U	20.4 U	51.1 U	0.0208 U	0.0208 U	0.0311 U	0.0208 U
UST D-B1	5/18/2017	4.37 U	20.8 U	52.1 U	0.0175 U	0.0175 U	0.0262 U	0.0175 U
UC-UST #1	6/6/2017	6.26 U	150	52.7 U	0.0250 U	0.0250 U	0.0376 U	0.0250 U
UC-UST #2	6/6/2017	6.35 UJ	547	51.3 U	0.0254 U	0.0254 U	0.0381 U	0.0254 U
MTCA Method A Leve	-	30 / 100 ^a	2,000	2,000	0.03	7.0	6.0	9.0

Notes:

Values in **bold** font indicate that the result reported meets or exceeds the most current MTCA level based on the Ecology website.

Model Toxics Control Act (MTCA) Cleanup Regulation, WAC 173-340. MTCA Method A values are from Ecology website CLARC tables downloaded August 2015 (https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx).

mg/kg - milligram per kilogram

TPH - total petroleum hydrocarbon

U - compound was analyzed for but not detected above the reporting limit shown.

VOC - volatile organic compounds

^a The MTCA Method A soil screening level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture.

The MTCA Method A screening level for all other gasoline mixtures is 30 mg/kg.

Figures



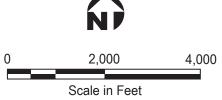


Figure 1 Site Location

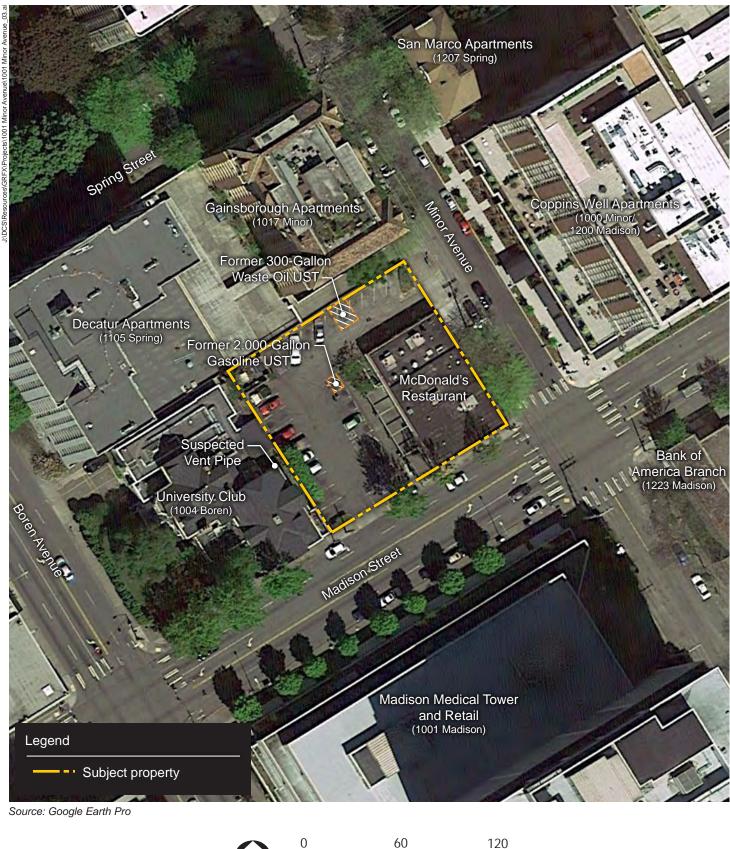
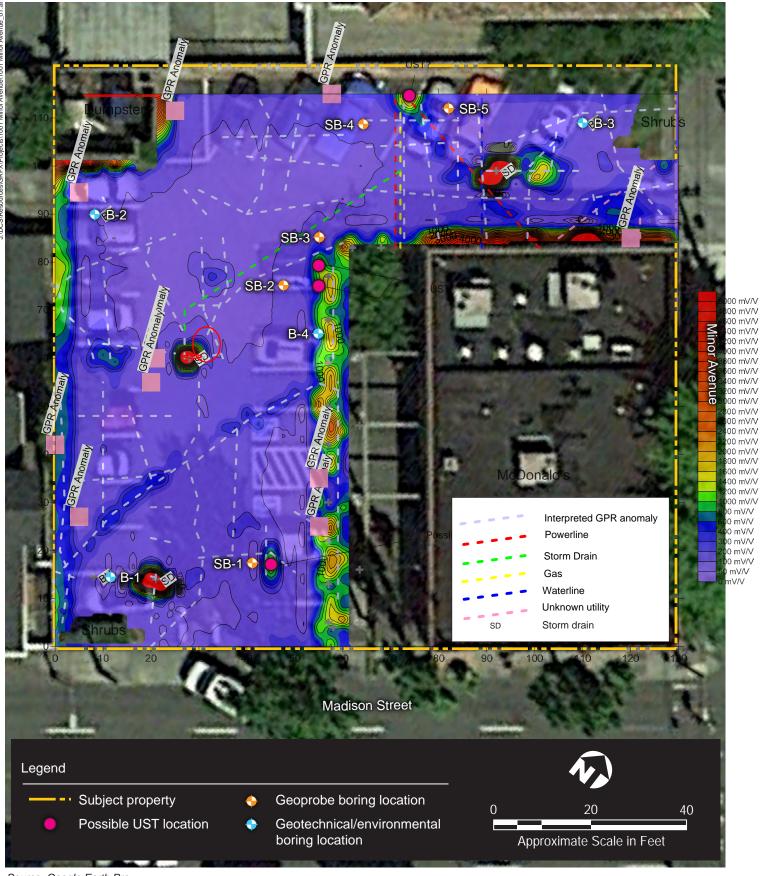




Figure 2 **Site Vicinity**

AECOM

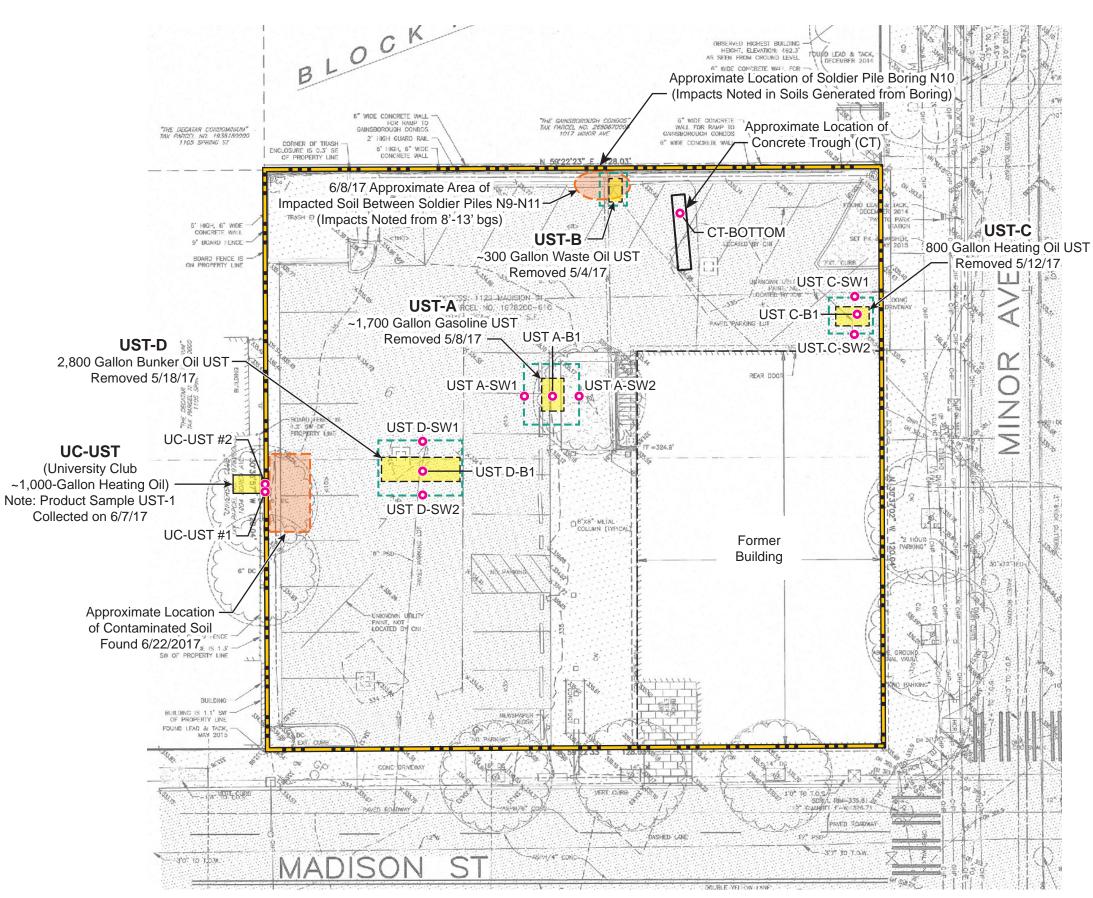
1001 Minor Avenue Seattle, Washington



Source: Google Earth Pro

Figure 3 Phase II ESA Boring and Geophysical Survey Locations





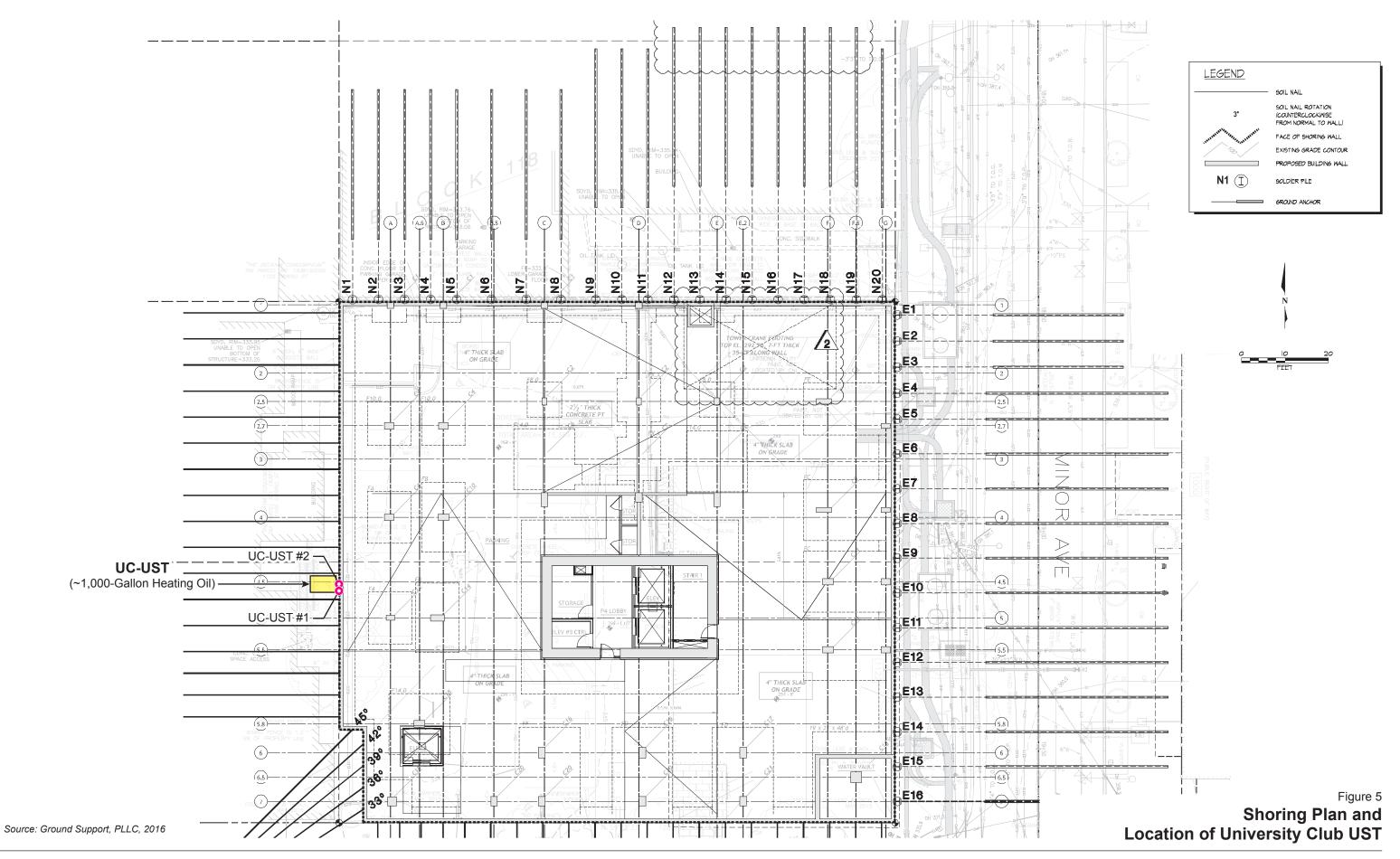
Source: ESM Consulting Engineers, 2015

Legend

	Subject property boundary
[]]]	Approximate extent of UST excavation
	Approximate location of UST
222	Approximate location of impacted soil, removed
0	Approximate location of confirmation sample location
	N
0	20 40
	Scale in Feet



1001 Minor Avenue Seattle, Washington

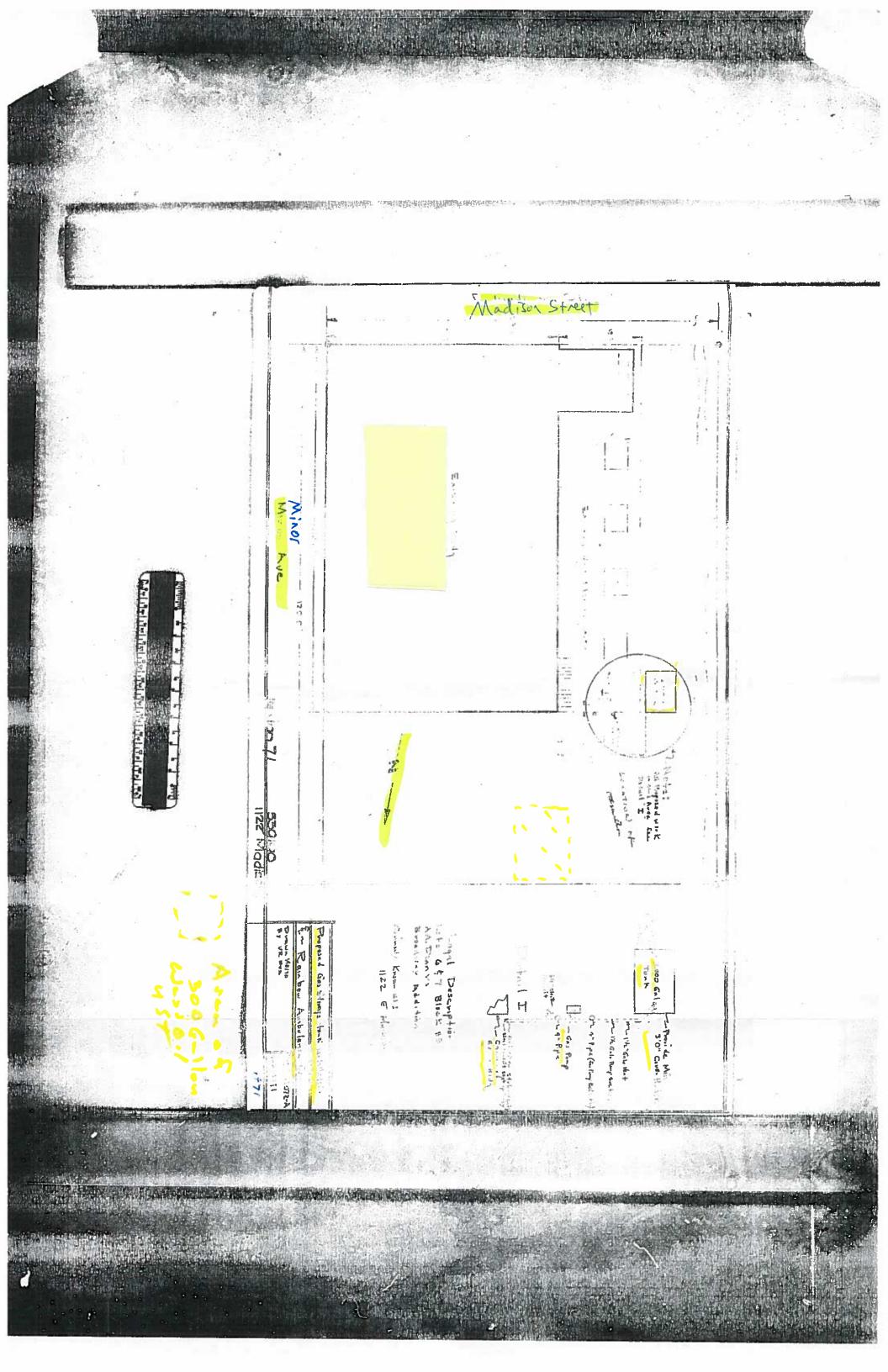


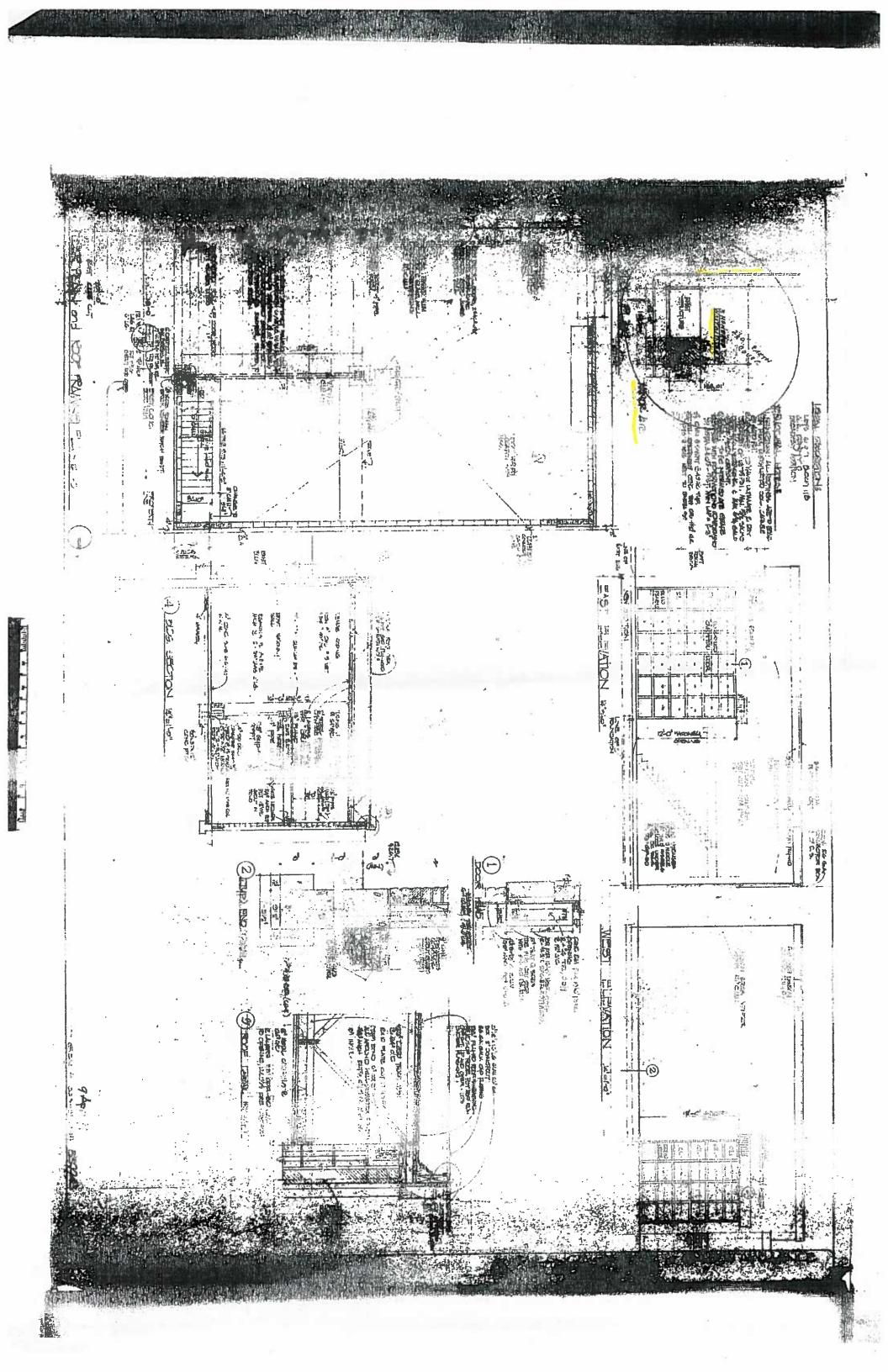
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1001 Minor Avenue Seattle, Washington

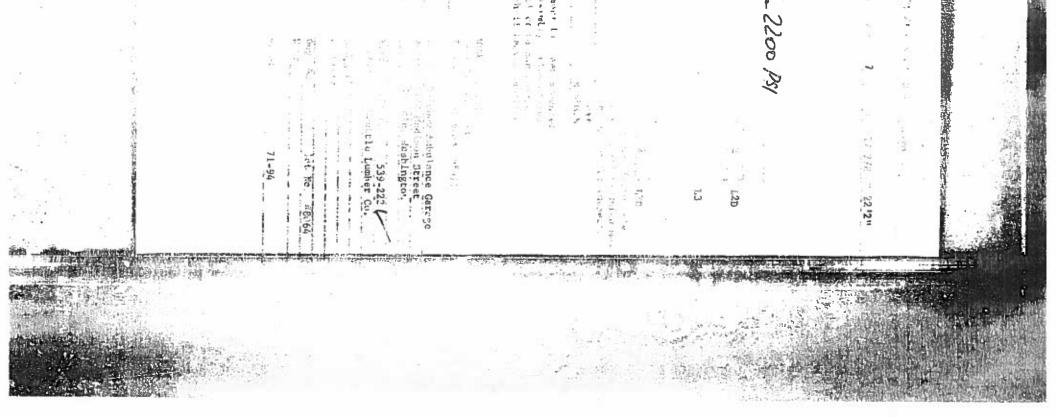
Appendix A

3 1000 Alt. int. extst. Mart. 1 III 1 Hr. P-1 Oarson	1 197.	5161 191915
600 Alter int. exist. bldg. 1-B III-1 Hr. 7-1	167 9	347026 1972
100 Install waste oil tank Tank Tank	EST -	539968
20,000 Gonst. additi	1971	222625
800 Install 2,000 gal. underground Steel Steel	0 197	539190 1971
0 800 Srec's waint. sign	1770	675665
70 1,100 Erect & maint. signe	0161	555855
0081- BTO BIZE	PATE OATE	MUL DING
		a transferre





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Appendix B



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

- 1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
- 2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
- 3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: 1001 Minor Avenue Property

Facility/Site Address: 1001 Minor Avenue, Seattle, WA 98104

Facility/Site No:

VCP Project No.:

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: David Raubvogel				Title: Senior Geologist	
Organization: AECOM					
Mailing address: 1111 3 rd Avenue, Suite # 1600					
City: Seattle			te: WA	Zip code: 98101	
Phone: 206-438-2284	Fax:		E-mail: david	.raubvogel@aecom.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS								
A. Exclusion from further evaluation.								
1. Does the Site qualify for an exclusion from further evaluation?								
Yes If you answered " YES, " then answer Question 2 .								
No or Unknown If you answered "NO" or "UKNOWN," then skip to Step 3B of this form.								
2. What is the basis for the exclusion? Check all that apply. Then skip to Step 4 of this form.								
Point of Compliance: WAC 173-340-7491(1)(a)								
\bigtriangleup All soil contamination is, or will be,* at least 15 feet below the surface.								
All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.								
Barriers to Exposure: WAC 173-340-7491(1)(b)								
All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.								
Undeveloped Land: WAC 173-340-7491(1)(c)								
 There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene. 								
For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous [#] undeveloped [±] land on or within 500 feet of any area of the Site.								
Background Concentrations: WAC 173-340-7491(1)(d)								
Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.								
 * An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology. * "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would 								
prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil. [#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.								

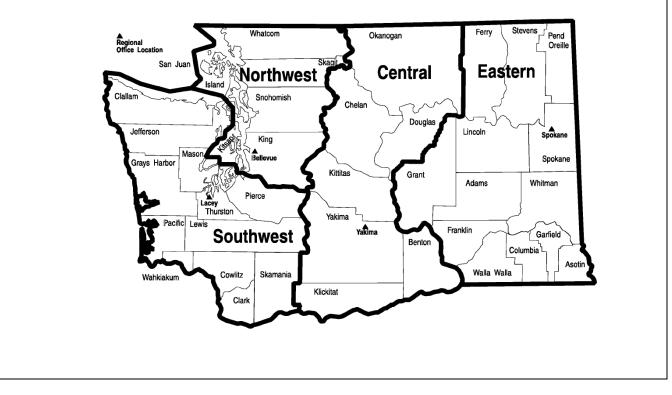
В.	. Simplified evaluation.							
1.	. Does the Site qualify for a simplified evaluation?							
	□ Y	es If you answered "YES," then answer Question 2 below.						
	☐ N Unkn	o or or or own If you answered " NO " or " UNKNOWN, " then skip to Step 3C of this form.						
2.	Did you co	onduct a simplified evaluation?						
	□ Y	es If you answered "YES," then answer Question 3 below.						
	🗌 N	o If you answered " NO ," then skip to Step 3C of this form.						
3.	Was furthe	er evaluation necessary?						
	□ Y	es If you answered "YES," then answer Question 4 below.						
	□ N	o If you answered " NO ," then answer Question 5 below.						
4.	lf further e	valuation was necessary, what did you do?						
		Used the concentrations listed in Table 749-2 as cleanup levels. If so, then skip to Step 4 of this form.						
		Conducted a site-specific evaluation. If so, then skip to Step 3C of this form.						
5.	If no furthe to Step 4 o	er evaluation was necessary, what was the reason? Check all that apply. Then skip f this form.						
	Exposure A	Analysis: WAC 173-340-7492(2)(a)						
		Area of soil contamination at the Site is not more than 350 square feet.						
		Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.						
	Pathway A	nalysis: WAC 173-340-7492(2)(b)						
		No potential exposure pathways from soil contamination to ecological receptors.						
	Contamina	nt Analysis: WAC 173-340-7492(2)(c)						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.						

C.	the problem	fic evaluation. A site-specific evaluation process consists of two parts: (1) form n, and (2) selecting the methods for addressing the identified problem. Both ste sultation with and approval by Ecology. See WAC 173-340-7493(1)(c).						
1.	Was there a problem? See WAC 173-340-7493(2).							
	🗌 Ye	es If you answered "YES," then answer Question 2 below.						
		If you answered "NO," then identify the reason here and then skip to Que below:	estion 5					
		No issues were identified during the problem formulation step	•-					
		While issues were identified, those issues were addressed by cleanup actions for protecting human health.	' the					
2.	What did y	ou do to resolve the problem? See WAC 173-340-7493(3).						
		Used the concentrations listed in Table 749-3 as cleanup levels. If so, then sh Question 5 below.	(ip to					
		Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate address the identified problem. <i>If so, then answer Questions 3 and 4 below.</i>	and					
3.	•	ducted further site-specific evaluations, what methods did you use? at apply. See WAC 173-340-7493(3).						
		Literature surveys.						
		Soil bioassays.						
		Wildlife exposure model.						
		Biomarkers.						
		Site-specific field studies.						
		Weight of evidence.						
		Other methods approved by Ecology. If so, please specify:						
4.	What was t	the result of those evaluations?						
		Confirmed there was no problem.						
		Confirmed there was a problem and established site-specific cleanup levels.						
5.		already obtained Ecology's approval of both your problem formulation an esolution steps?	d					
	□ Ye	es If so, please identify the Ecology staff who approved those steps:						
		0						

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

Northwest Region:	Central Region:
Attn: VCP Coordinator	Attn: VCP Coordinator
3190 160 th Ave. SE	1250 West Alder St.
Bellevue, WA 98008-5452	Union Gap, WA 98903-0009
Southwest Region:	Eastern Region:
Attn: VCP Coordinator	Attn: VCP Coordinator
P.O. Box 47775	N. 4601 Monroe
Olympia, WA 98504-7775	Spokane WA 99205-1295



ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Appendix C

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: UST-A 5-4-17	
Description: Exposed top of UST - A west of building footprint. Note piping on left side of tank.	

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: 5-4-17	
Description: 300 gallon UST - B being loaded onto a truck for recycling.	

1001 Minor Avenue		UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID UST-B	Date: 5-4-17	
Description Location of 3 UST (UST – following rem northern prop boundary. Pe noted in the t cavity.	00 gallon B) oval on the perty a gravel	

1001 Minor Avenue		UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID A	Date: 5-8-17	
Descriptic Exposed 1,7 tank (UST – located in c portion of S	700 gallon · A) entral	

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: N/A 5-8-17	
Description: 1,700 gallon UST (UST A) being loaded onto truck for offsite disposal	

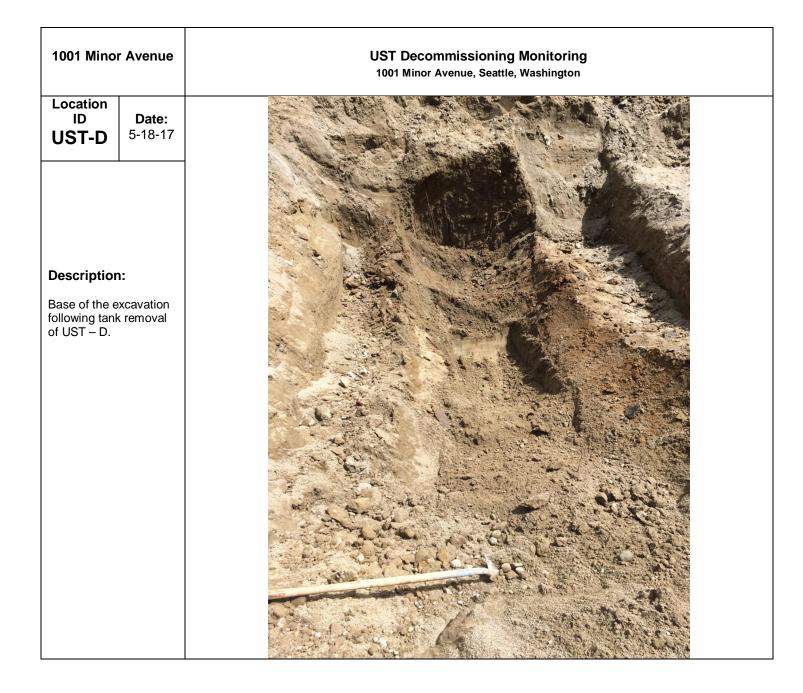
1001 Minor Avenue		UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington	
Location ID UST-C	Date: 5-12-17		
Description: UST-C (800 gallon) being removed from the excavation. Water in pit was from surface water, not groundwater. View to the southwest.			

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: UST-C 5-12-17	
Description: Tank cavity of the 800 gallon heating oil UST (UST-C). Contamination was not evident.	

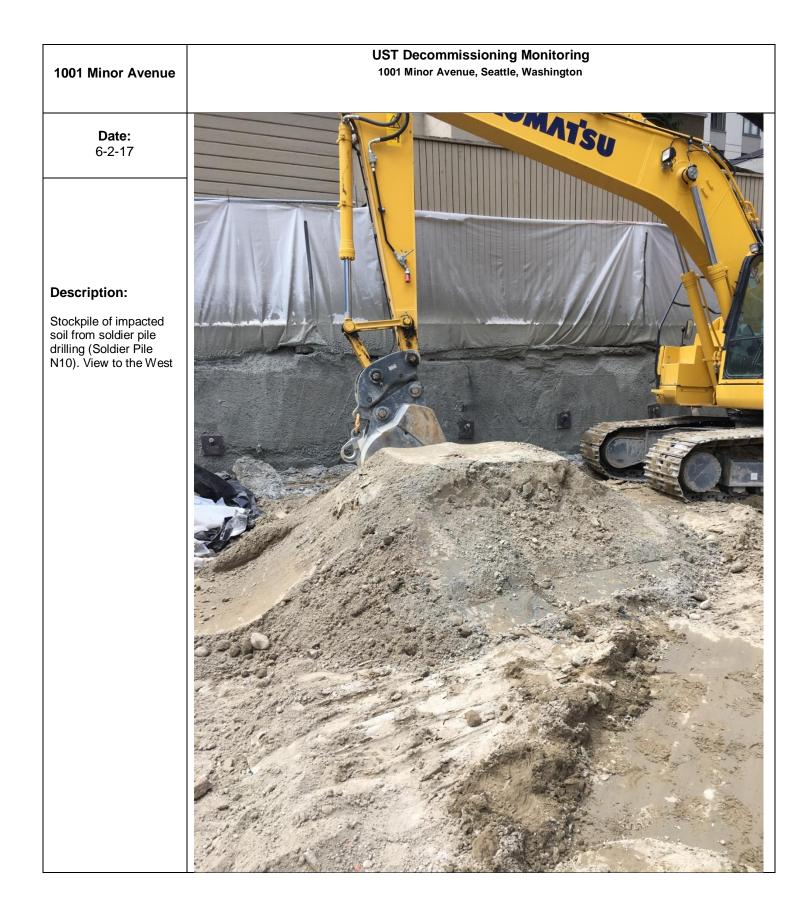
		UST Decommissioning Monitoring
1001 Minor Avenue		1001 Minor Avenue, Seattle, Washington
Location ID UST-D	Date: 5-18-17	
Descriptic Filco and M pumping ou oil from US ⁻ location.	arVac	

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: UST-D 5-18-17	
Description: Exposing the 2800 gallon Bunker oil tank (UST-D). View is to the southeast.	

1001 Minor Avenue	UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID Date: UST-C 5-18-17 Description:	<image/>
Removing UST-D, note riveted tank seams. Hole in the end of tank created by tank removal contractor to access the interior of tank. View to the south (Madison St).	

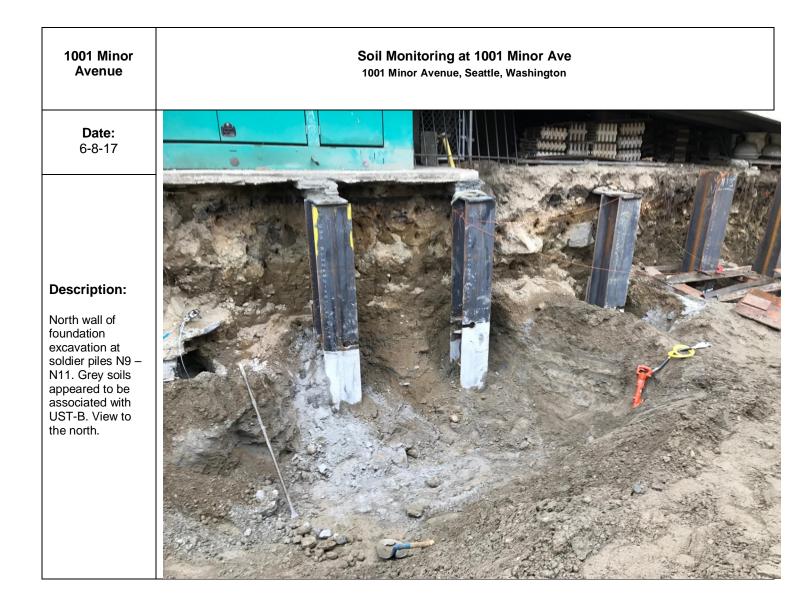


1001 Minor Avenue		UST Decommissioning Monitoring 1001 Minor Avenue, Seattle, Washington
Location ID NA	Date: 5-18-17	
Description UST-D loade truck. View to northwest.	d on Filco	



University Club	UST Site Assessment – University Club 1004 Boren Avenue, Seattle, Washington
Location ID UC-USTDate: 6-6-17Description:Location of UST 	

University Club	UST Site Assessment – University Club 1004 Boren Avenue, Seattle, Washington
Location ID UC-UST Date: 6-9-17 Description: University Club tank being pumped out, the east end of the tank exposed in sidewall of excavation. Trench box used to shore excavation walls. View to the west.	



1001 Minor Avenue	Soil Monitoring at 1001 Minor Ave 1001 Minor Avenue, Seattle, Washington
Date: 6-8-17	
Description: View looking down from the north wall of the excavation at piles N9 – N11. Note grey discoloration near base of the excavation.	

1001 Minor Avenue	Soil Monitoring at 1001 Minor Ave 1001 Minor Avenue, Seattle, Washington
Date: 6-22-17	
Description: Stockpiled soil from excavation along west side of property. University Club building in background, view to the southwest. Excavator situated at the approximate location of the petroleum affected soils at an approximate elevation of 327 ft. (msl)	

1001 Minor Avenue	Soil Monitoring at 1001 Minor Ave 1001 Minor Avenue, Seattle, Washington								
Date: 6-22-17	F cue cue cue cue								
Description: View looking to the west at excavated area beneath the UC-UST at approximately 318 feet elevation, no contamination was noted in the in place soils at this elevation.									

1001 Minor Avenue	Soil Monitoring at 1001 Minor Ave 1001 Minor Avenue, Seattle, Washington
Date: 7-11-17	
Description: View looking south. Lagging and shotcrete wall evident as excavation activities progress.	<image/>

1001 Minor Avenue	Soil Monitoring at 1001 Minor 1001 Minor Avenue, Seattle, Washington
Date: 7-11-17	
Description: View of SE corner of Site (looking east).Stockpile of clean sandy soils removed for the foundation excavation well below the Site surface grade.	

Appendix D



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Work Order Number: 1705089

May 11, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 4 sample(s) on 5/8/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohal c. Rady

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor 1705089	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1705089-001	UST A - B1	05/08/2017 10:55 AM	05/08/2017 12:55 PM
1705089-002	UST A - SW1	05/08/2017 11:00 AM	05/08/2017 12:55 PM
1705089-003	UST A - SW2	05/08/2017 11:05 AM	05/08/2017 12:55 PM
1705089-004	Trip Blank	05/03/2017 10:30 AM	05/08/2017 12:55 PM



Case Narrative WO#: 1705089 Date: 5/11/2017

CLIENT: AECOM Project: 1001 Minor

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1705089** Date Reported: **5/11/2017**

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



Analytical Report

 Work Order:
 1705089

 Date Reported:
 5/11/2017

Client: AECOM				Collection	Dat	t e: 5/8/2017 10:55:00 AM
Project: 1001 Minor Lab ID: 1705089-001				Matrix: So	oil	
Client Sample ID: UST A - B1						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	ID:	16993 Analyst: SB
Diesel (Fuel Oil)	ND	20.0		mg/Kg-dry	1	5/10/2017 1:15:06 AM
Heavy Oil	ND	49.9		mg/Kg-dry	1	5/10/2017 1:15:06 AM
Surr: 2-Fluorobiphenyl	108	50-150		%Rec	1	5/10/2017 1:15:06 AM
Surr: o-Terphenyl	107	50-150		%Rec	1	5/10/2017 1:15:06 AM
Gasoline by NWTPH-Gx				Batch	ID:	16996 Analyst: NG
Gasoline	ND	5.53		mg/Kg-dry	1	5/9/2017 11:52:23 PM
Surr: 4-Bromofluorobenzene	104	65-135		%Rec	1	5/9/2017 11:52:23 PM
Surr: Toluene-d8	88.9	65-135		%Rec	1	5/9/2017 11:52:23 PM
Volatile Organic Compounds by El	PA Method	<u>8260C</u>		Batch	ID:	16996 Analyst: NG
Benzene	ND	0.0221		mg/Kg-dry	1	5/9/2017 11:52:23 PM
Toluene	ND	0.0221		mg/Kg-dry	1	5/9/2017 11:52:23 PM
Ethylbenzene	ND	0.0332		mg/Kg-dry	1	5/9/2017 11:52:23 PM
m,p-Xylene	ND	0.0221		mg/Kg-dry	1	5/9/2017 11:52:23 PM
o-Xylene	ND	0.0221		mg/Kg-dry	1	5/9/2017 11:52:23 PM
Surr: Dibromofluoromethane	105	56.5-129		%Rec	1	5/9/2017 11:52:23 PM
Surr: Toluene-d8	102	64.5-151		%Rec	1	5/9/2017 11:52:23 PM
Surr: 1-Bromo-4-fluorobenzene	115	63.1-141		%Rec	1	5/9/2017 11:52:23 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36007 Analyst: CG
Percent Moisture	9.41	0.500		wt%	1	5/9/2017 12:04:45 PM



Analytical Report

 Work Order:
 1705089

 Date Reported:
 5/11/2017

Client: AECOM				Collection	Dat	t e: 5/8/2017 11:00:00 AM
Project: 1001 Minor Lab ID: 1705089-002				Matrix: So	.:	
				Watrix. 50	011	
Client Sample ID: UST A - SW1						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	<u>k/Dx Ext.</u>			Batch	ID:	16993 Analyst: SB
Diesel (Fuel Oil)	ND	19.9		mg/Kg-dry	1	5/10/2017 4:24:00 AM
Heavy Oil	ND	49.9		mg/Kg-dry	1	5/10/2017 4:24:00 AM
Surr: 2-Fluorobiphenyl	110	50-150		%Rec	1	5/10/2017 4:24:00 AM
Surr: o-Terphenyl	107	50-150		%Rec	1	5/10/2017 4:24:00 AM
Gasoline by NWTPH-Gx				Batch	ID:	16996 Analyst: NG
Gasoline	ND	5.88		mg/Kg-dry	1	5/10/2017 12:22:29 AM
Surr: 4-Bromofluorobenzene	105	65-135		%Rec	1	5/10/2017 12:22:29 AM
Surr: Toluene-d8	96.3	65-135		%Rec	1	5/10/2017 12:22:29 AM
Volatile Organic Compounds by EF	A Method	<u>8260C</u>		Batch	ID:	16996 Analyst: NG
Benzene	ND	0.0235		mg/Kg-dry	1	5/10/2017 12:22:29 AM
Toluene	ND	0.0235		mg/Kg-dry	1	5/10/2017 12:22:29 AM
Ethylbenzene	ND	0.0353		mg/Kg-dry	1	5/10/2017 12:22:29 AM
m,p-Xylene	ND	0.0235		mg/Kg-dry	1	5/10/2017 12:22:29 AM
o-Xylene	ND	0.0235		mg/Kg-dry	1	5/10/2017 12:22:29 AM
Surr: Dibromofluoromethane	102	56.5-129		%Rec	1	5/10/2017 12:22:29 AM
Surr: Toluene-d8	101	64.5-151		%Rec	1	5/10/2017 12:22:29 AM
Surr: 1-Bromo-4-fluorobenzene	115	63.1-141		%Rec	1	5/10/2017 12:22:29 AM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36007 Analyst: CG
Percent Moisture	11.4	0.500		wt%	1	5/9/2017 12:04:45 PM



Analytical Report

 Work Order:
 1705089

 Date Reported:
 5/11/2017

Client: AECOM				Collection	Dat	t e: 5/8/2017 11:05:00 AM
Project: 1001 Minor Lab ID: 1705089-003				Matrix: So		
				Matrix: 50	011	
Client Sample ID: UST A - SW2						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	<u> v/Dx Ext.</u>			Batch	ID:	16993 Analyst: SB
Diesel (Fuel Oil)	ND	19.0		mg/Kg-dry	1	5/10/2017 4:55:22 AM
Heavy Oil	ND	47.5		mg/Kg-dry	1	5/10/2017 4:55:22 AM
Surr: 2-Fluorobiphenyl	99.9	50-150		%Rec	1	5/10/2017 4:55:22 AM
Surr: o-Terphenyl	101	50-150		%Rec	1	5/10/2017 4:55:22 AM
Gasoline by NWTPH-Gx				Batch	ID:	16996 Analyst: NG
Gasoline	ND	5.47		mg/Kg-dry	1	5/10/2017 12:52:31 AM
Surr: 4-Bromofluorobenzene	108	65-135		%Rec	1	5/10/2017 12:52:31 AM
Surr: Toluene-d8	92.8	65-135		%Rec	1	5/10/2017 12:52:31 AM
Volatile Organic Compounds by EF	A Method	<u>8260C</u>		Batch	ID:	16996 Analyst: NG
Benzene	ND	0.0219		mg/Kg-dry	1	5/10/2017 12:52:31 AM
Toluene	ND	0.0219		mg/Kg-dry	1	5/10/2017 12:52:31 AM
Ethylbenzene	ND	0.0328		mg/Kg-dry	1	5/10/2017 12:52:31 AM
m,p-Xylene	ND	0.0219		mg/Kg-dry	1	5/10/2017 12:52:31 AM
o-Xylene	ND	0.0219		mg/Kg-dry	1	5/10/2017 12:52:31 AM
Surr: Dibromofluoromethane	105	56.5-129		%Rec	1	5/10/2017 12:52:31 AM
Surr: Toluene-d8	118	64.5-151		%Rec	1	5/10/2017 12:52:31 AM
Surr: 1-Bromo-4-fluorobenzene	97.4	63.1-141		%Rec	1	5/10/2017 12:52:31 AM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36007 Analyst: CG
Percent Moisture	7.88	0.500		wt%	1	5/9/2017 12:04:45 PM



Work Order:	1705089									20	SUMMAI		POR
CLIENT:	AECOM								Discol				
Project:	1001 Minor								Diesei	and Heavy		/TPH-DX/	
Sample ID MB-16993 S		SampType	: MBLK			Units: mg	′Kg	Prep Dat	e: 5/9/201	7	RunNo: 36017		
Client ID: MBLKS	i	Batch ID:	16993					Analysis Dat	e: 5/9/201	7	SeqNo: 68	9924	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.0									
Heavy Oil			ND	50.0									
Surr: 2-Fluorobiph			19.7		20.00		98.6	50	150				
Surr: o-Terphenyl			20.0		20.00		100	50	150				
Sample ID LCS-16	993	SampType	E: LCS		Units: mg/Kg Prep Date: 5/9/2017				7	RunNo: 36017			
Client ID: LCSS		Batch ID:	16993					Analysis Dat	e: 5/9/201	7	SeqNo: 68	9923	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			497	20.0	500.0	0	99.4	65	135				
Surr: 2-Fluorobiph	nenyl		20.9		20.00		105	50	150				
Surr: o-Terphenyl			22.9		20.00		115	50	150				
Sample ID 1705089	9-001ADUP	SampType	: DUP			Units: mg	′Kg-dry	Prep Date: 5/9/2017			RunNo: 36017		
Client ID: UST A -	B1	Batch ID:	16993					Analysis Dat	e: 5/10/20	17	SeqNo: 69	0626	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.6						0		30	
Heavy Oil			ND	51.5						0		30	
Surr: 2-Fluorobiph	•		21.2		20.61		103	50	150		0		
Surr: o-Terphenyl			20.9		20.61		101	50	150		0		
Sample ID 1705089	9-001AMS	SampType	e: MS			Units: mg	′Kg-dry	Prep Dat	e: 5/9/201	7	RunNo: 36	017	
Client ID: UST A -	B1	Batch ID:	16993					Analysis Dat	e: 5/10/20	17	SeqNo: 69	0627	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			529	20.8	519.2	0	102	65	135				
Surr: 2-Fluorobiph	nenyl		22.6		20.77		109	50	150				



Work Order: 1705089								QCS	SUMMAI	RY REF	POR	
CLIENT: AECOM							Discol					
Project: 1001 Minor							Diesei	and Heavy		/TPH-DX/		
Sample ID 1705089-001AMS	SampType: MS			Units: mg/K	g-dry	Prep Date	e: 5/9/20 1	17	RunNo: 36	017		
Client ID: UST A - B1	Batch ID: 16993					Analysis Date	e: 5/10/2 0	017	SeqNo: 69	0627		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Sample ID 1705089-001AMSD	SampType: MSD			Units: mg/K	g-dry	Prep Date	e: 5/9/20 1	17	RunNo: 36017			
Client ID: UST A - B1	ent ID: UST A - B1 Batch ID: 16993					Analysis Date: 5/10/2017			SeqNo: 690628			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)	533	20.8	521.2	0	102	65	135	528.7	0.749	30		
Surr: 2-Fluorobiphenyl	20.5		20.85		98.3	50	150		0			
Surr: o-Terphenyl	22.8		20.85		109	50	150		0			
Sample ID 1705097-007ADUP	SampType: DUP			Units: mg/K	g-dry	Prep Date	e: 5/9/20 1	17	RunNo: 36	017		
Client ID: BATCH	Batch ID: 16993					Analysis Date	e: 5/10/2 0	017	SeqNo: 690	0638		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)	ND	21.0						34.97	37.1	30		
Diesel Range Organics (C12-C24)	24.0	21.0						34.97	37.1	30		
Heavy Oil	ND	52.4						0		30		
Surr: 2-Fluorobiphenyl	21.8		20.97		104	50	150		0			
Surr: o-Terphenyl	21.3		20.97		101	50	150		0			
NOTES:												

DRO - Indicates the presence of unresolved compounds eluting from dodecane through tetracosane (C12-C24).



Work Order: CLIENT: Project:	1705089 AECOM 1001 Minor								QC S	SUMMAI Gasolin	RY REI e by NW	_
Sample ID LCS-1	6996	SampType: LCS			Units: mg/Kg		Prep Date	e: 5/9/201	7	RunNo: 36	034	
Client ID: LCSS		Batch ID: 16996					Analysis Date	e: 5/9/201	7	SeqNo: 69	0190	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		25.6	5.00	25.00	0	102	65	135				
Surr: Toluene-da	8	1.24		1.250		99.0	65	135				
Surr: 4-Bromoflu	uorobenzene	1.31		1.250		105	65	135				
Sample ID MB-16	6996	SampType: MBLK			Units: mg/Kg Prep Date: 5/9/2017				RunNo: 36034			
Client ID: MBLK	S	Batch ID: 16996				Analysis Date: 5/9/2017			SeqNo: 69	0191		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	5.00									
Surr: Toluene-da	8	1.20		1.250		96.4	65	135				
Surr: 4-Bromoflu	uorobenzene	1.27		1.250		102	65	135				
Sample ID 17050	75-001BDUP	SampType: DUP			Units: mg/Kg-	dry	Prep Date	: 5/9/201	7	RunNo: 36034		
Client ID: BATC	н	Batch ID: 16996					Analysis Date	: 5/9/201	7	SeqNo: 690172		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	6.95						0		30	
Surr: Toluene-da	8	1.74		1.737		100	65	135		0		
Surr: 4-Bromoflu	uorobenzene	1.66		1.737		95.6	65	135		0		
Sample ID 17050	89-003BDUP	SampType: DUP			Units: mg/Kg-	dry	Prep Date	e: 5/9/201	7	RunNo: 36	034	
Client ID: UST A	- SW2	Batch ID: 16996					Analysis Date	e: 5/10/20	17	SeqNo: 69	0177	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	5.47						0		30	
Surr: Toluene-da	8	1.41		1.366		103	65	135		0		
Surr: 4-Bromoflu	uorobenzene	1.41		1.366		103	65	135		0		



Work Order: 1705 CLIENT: AECO Project: 1001								QC S	SUMMAI Gasoline	RY REF e by NW1	
Sample ID 1705097-003B	Sample ID 1705097-003BMS SampType: MS		Units: mg/Kg-dry				te: 5/9/20 1	17	RunNo: 36034		
Client ID: BATCH	Batch ID: 169	96			Analysis Date: 5/10/2017			017	SeqNo: 690192		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	23.3	5.13	25.65	0	90.8	65	135				
Surr: Toluene-d8	1.30		1.283		101	65	135				
Surr: 4-Bromofluorobenz	ene 1.32		1.283		103	65	135				
Sample ID 1705097-003B	MSD SampType: MSI)		Units: mg	g/Kg-dry	Prep Da	te: 5/9/201	17	RunNo: 36034		
Client ID: BATCH	Batch ID: 169	96				Analysis Da	te: 5/10/20	017	SeqNo: 690	0193	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	18.4	5.13	25.65	0	71.9	65	135	23.29	23.3	30	
Surr: Toluene-d8	1.30		1.283		101	65	135		0		
Surr: 4-Bromofluorobenz	ene 1.32		1.283		103	65	135		0		



Work Order:	1705089					QC SUMMARY REPO	RT
CLIENT:	AECOM						
Project:	1001 Minor					Sample Moisture (Percent Mois	ture)
Sample ID 17050	91-001ADUP	SampType: DUP			Units: wt%	Prep Date: 5/9/2017 RunNo: 36007	
Client ID: BATC	н	Batch ID: R36007				Analysis Date: 5/9/2017 SeqNo: 689792	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Q	Qual
Percent Moisture		21.1	0.500			21.65 2.42 20	

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Work Order: 1705089								00 9	SUMMA		
CLIENT: AECOM							_	•			-
Project: 1001 Minor						Volatile C	Organic	: Compoun	nds by EP/	A Method	8260
Sample ID LCS-16996	SampType: LCS			Units: mg/Kg		Prep Date:	5/9/2017	7	RunNo: 360)33	
Client ID: LCSS	Batch ID: 16996					Analysis Date:	5/9/2017	7	SeqNo: 690)169	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.29	0.0200	1.000	0	129	64.3	133				
Toluene	1.05	0.0200	1.000	0	105	67.3	138				
Ethylbenzene	1.12	0.0300	1.000	0	112	74	129				
m,p-Xylene	2.05	0.0200	2.000	0	102	70	124				
o-Xylene	1.05	0.0200	1.000	0	105	68.1	139				
Surr: Dibromofluoromethane	1.39		1.250		111	56.5	129				
Surr: Toluene-d8	1.39		1.250		111	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.56		1.250		125	63.1	141				
Sample ID MB-16996	SampType: MBLK			Units: mg/Kg		Prep Date:	5/9/2017	7	RunNo: 360)33	
Client ID: MBLKS	Batch ID: 16996					Analysis Date:	5/9/2017	7	SeqNo: 690	0170	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.26		1.250		101	56.5	129				
Surr: Toluene-d8	1.21		1.250		96.6	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.16		1.250		92.8	63.1	141				
						Prep Date:	5/0/201	7	RunNo: 360	133	
Sample ID 1705075-001BDUP	SampType: DUP			Units: mg/Kg-	dry	Thep Date.	J/ 9/ 201				
Sample ID 1705075-001BDUP Client ID: BATCH	SampType: DUP Batch ID: 16996			Units: mg/Kg-	ary	Analysis Date:			SeqNo: 690		
•		RL	SPK value	Units: mg/Kg-	%REC	Analysis Date:	5/9/2017	7	SeqNo: 690		Qual
Client ID: BATCH	Batch ID: 16996	RL 0.0278	SPK value		-	Analysis Date:	5/9/2017	7	SeqNo: 690)151	Qual
Client ID: BATCH Analyte	Batch ID: 16996 Result		SPK value		-	Analysis Date:	5/9/2017	7 RPD Ref Val	SeqNo: 690	0 151 RPDLimit	Qual
Client ID: BATCH Analyte Benzene	Batch ID: 16996 Result ND	0.0278	SPK value		-	Analysis Date:	5/9/2017	7 RPD Ref Val 0	SeqNo: 690	0 151 RPDLimit 30	Qual



Work Order: 1705089								2.00	SUMMA		PORT
CLIENT: AECOM								•			-
Project: 1001 Minor						Volatile	Organio	c Compoun	ids by EPA	A Method	82600
Sample ID 1705075-001BDUP	SampType: DUP			Units: mg/l	Kg-dry	Prep Dat	e: 5/9/201	17	RunNo: 360	033	
Client ID: BATCH	Batch ID: 16996					Analysis Dat	e: 5/9/201	17	SeqNo: 690	0151	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0278						0		30	
Surr: Dibromofluoromethane	1.55		1.737		89.3	56.5	129		0		
Surr: Toluene-d8	1.70		1.737		97.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.65		1.737		95.0	63.1	141		0		
Sample ID 1705089-003BDUP	SampType: DUP			Units: mg/	Kg-dry	Prep Dat	e: 5/9/201	17	RunNo: 360	033	
Client ID: UST A - SW2	Batch ID: 16996					Analysis Dat	e: 5/10/20)17	SeqNo: 690	0158	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0219						0		30	
Toluene	ND	0.0219						0		30	
Ethylbenzene	ND	0.0328						0		30	
m,p-Xylene	ND	0.0219						0		30	
o-Xylene	ND	0.0219						0		30	
Surr: Dibromofluoromethane	1.21		1.366		88.2	56.5	129		0		
Surr: Toluene-d8	1.27		1.366		93.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.39		1.366		101	63.1	141		0		
Sample ID 1705089-001BMS	SampType: MS			Units: mg/	Kg-dry	Prep Dat	e: 5/9/201	17	RunNo: 360	033	
Client ID: UST A - B1	Batch ID: 16996					Analysis Dat	e: 5/10/20)17	SeqNo: 690	0154	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.17	0.0221	1.106	0	106	63.5	133				
Toluene	1.11	0.0221	1.106	0	100	63.4	132				
Ethylbenzene	1.27	0.0332	1.106	0	115	54.5	134				
m,p-Xylene	2.62	0.0221	2.212	0	118	53.1	132				
o-Xylene	1.28	0.0221	1.106	0	116	53.3	139				
Surr: Dibromofluoromethane	1.25		1.382		90.1	56.5	129				
Surr: Toluene-d8	1.43		1.382		103	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.62		1.382		118	63.1	141				

0

0



Work Order: CLIENT: Project:	1705089 AECOM 1001 Minor						Volatile (Organi	QC S c Compoun	SUMMAI		
Sample ID 17050	89-001BMS	SampType: MS			Units: mg/k	(g-dry	Prep Date:	5/9/20 1	17	RunNo: 36	033	
Client ID: UST A	A - B1	Batch ID: 16996					Analysis Date:	5/10/20	017	SeqNo: 69	0154	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 17050	89-001BMSD	SampType: MSD			Units: mg/ł	(g-dry	Prep Date:	5/9/201	17	RunNo: 36	033	
Client ID: UST A	A - B1	Batch ID: 16996					Analysis Date:	5/10/20	017	SeqNo: 69	0155	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		1.20	0.0221	1.106	0	109	63.5	133	1.167	2.86	30	
Toluene		1.02	0.0221	1.106	0	91.8	63.4	132	1.105	8.52	30	
Ethylbenzene		1.29	0.0332	1.106	0	117	54.5	134	1.268	1.85	30	
m,p-Xylene		2.39	0.0221	2.212	0	108	53.1	132	2.615	8.85	30	
o-Xylene		0.970	0.0221	1.106	0	87.7	53.3	139	1.285	27.9	30	
Surr: Dibromoflu	uoromethane	1.31		1.382		94.5	56.5	129		0		

88.6

123

64.5

63.1

151

141

1.382

1.382

Surr: Toluene-d8

Surr: 1-Bromo-4-fluorobenzene

1.22

1.69



Sample Log-In Check List

CI	ient Name:	URS	Work Order Num	ber: 1705089	
Lo	ogged by:	Clare Griggs	Date Received:	5/8/2017 1	2:55:00 PM
<u>Cha</u>	in of Cust	ody			
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present
2.	How was the	sample delivered?	<u>Client</u>		
Log	In				
-	Coolers are p	present?	Yes 🖌	No 🗌	
4.	Shipping con	tainer/cooler in good condition?	Yes 🖌	No 🗌	
5.		ls present on shipping container/cooler? ments for Custody Seals not intact)	Yes	No 🗌	Not Required 🗹
6.		npt made to cool the samples?	Yes 🖌	No 🗌	
7.	Were all item	s received at a temperature of >0°C to 10.0°C*	Yes 🗹	No 🗌	
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌	
9.	Sufficient sar	nple volume for indicated test(s)?	Yes 🖌	No 🗌	
10.	Are samples	properly preserved?	Yes 🖌	No 🗌	
11.	Was preserva	ative added to bottles?	Yes	No 🗹	NA 🗌
12.	Is there head	space in the VOA vials?	Yes	No 🗌	NA 🗹
13.	Did all sample	es containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌	
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗌	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌	
16.	Is it clear what	at analyses were requested?	Yes 🖌	No 🗌	
17.	Were all hold	ing times able to be met?	Yes 🗹	No 🗌	
<u>Spe</u>	cial Handl	ing (if applicable)			
18.	Was client no	tified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
	Person	Notified: Date			
	By Who	m: Via:	🗌 eMail 🗌 Ph	ione 🗌 Fax 🛛	In Person
	Regardi	ng:			
	Client In	structions:			
19.	Additional rer	narks:			

Item Information

Item #	Temp ⁰C
Cooler	2.1
Sample	1.9

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Same Day (specify)										
				×						
Next Day	17 1255	Date/Time 518/20	lived	Received	1255	S-8-17	Date/Time Date/Time		C	x Relinquished
3 Day	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.	Client named above and that I	al on behalf of the (remont Analytic	ment with F	this Agree f this Agree	I represent that I am authorized to enter into this Agreement each of the terms on the front and backside of this Agreement.	e front and	hat I am au erms on the	represent
		Nitrate+Nitrite	Fluoride Nitrat	O-Phosphate	Bromide	Sulfate	Chloride	Nitrite	e): Nitrate	***Anions (Circle):
Chandard	Sb Se Sr Sn Ti TI U V Zn	Mg Mn Mo Na Ni Pb	Be Ca Cd Co Cr Cu Fe Hg K	Ag Al As B Ba Be	Individual:	ants TAL	Priority Pollutants	RCRA-8	: MTCA-5	**Metals (Circle): MTCA-5
Turn-around Time:	SW = Storm Water, WW = Waste Water	GW = Ground Water,	SL = Solid, W = Water, DW = Drinking Water,	iment, SL = Solid, \	Soil, SD = Sed	<pre>Product, S =</pre>	*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment,	ıs, B = Bulk,	AQ = Aqueou	atrix: A = Air,
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Comments			1400 140 14	4052 (CRP 4069) (-0.11)	Sample Type (Matrix)*	Sample	Sample Date			Sample Name
March 1 - 1. Carolicae 1969 3 March 1 - 1. Carolicae	111111	A DECOWICIN		PM Email: d2vid.					10 N(34 S	Fax:
We we house that both		N N		-						
Disposal by lab (after 30 days)	Sample Disposal: Return to client	Rzubuogod		P			700	138-2	206-438-2700	Telephone:
	and the second state of the second	1441 00 22 A langest by more	Souther way	Location: Sez		-	See He, WA, 9810	NN,	See He	City, State, Zip:
2	Contract of Contract of Contract	Cossally	Devetris Cze	Collected by: ${\cal D}$		1600	e ste	d Ave	11 3rd	Address:
age	built gaves the to warp?			Project No:					AELON	Client: A
17	Special Remarks:		DOI Minor	Project Name: 1001				1.440 H 1.8 0		
	Laboratory Project No (internal):	Page: of:	4	Date: 5-8-17	12	Tel: 206-352-3790			9	
greement	Laboratory Services Agreement	a &	chain of custody Recor	Chai	A 98103	Seattle, WA 98103	3			



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Work Order Number: 1705159

May 22, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 5 sample(s) on 5/15/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohal c. Rady

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor 1705159	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1705159-001	UST C - SW 1	05/12/2017 8:20 AM	05/15/2017 9:05 AM
1705159-002	UST C - SW 2	05/12/2017 9:00 AM	05/15/2017 9:05 AM
1705159-003	UST C - B 1	05/12/2017 1:30 PM	05/15/2017 9:05 AM
1705159-004	CT - Bottom	05/15/2017 8:10 AM	05/15/2017 9:05 AM
1705159-005	CT - Stockpile	05/15/2017 8:15 AM	05/15/2017 9:05 AM



Case Narrative

WO#: **1705159** Date: **5/22/2017**

CLIENT: AECOM Project: 1001 Minor

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1705159** Date Reported: **5/22/2017**

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: AECOM				Collection	Dat	t e: 5/12/20 ⁻	17 8:20:00 AM	
Project: 1001 Minor				Metrix: 0				
Lab ID: 1705159-001				Matrix: So	DII			
Client Sample ID: UST C - SW 1								
Analyses	Result	RL	Qual	Units	DF	= Dat	te Analyzed	
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	ID:	17044	Analyst: SB	
Diesel (Fuel Oil)	ND	20.5		mg/Kg-dry	1	5/15/2	2017 10:41:23 PM	
Heavy Oil	ND	51.3		mg/Kg-dry	1	5/15/2	2017 10:41:23 PM	
Surr: 2-Fluorobiphenyl	77.8	50-150		%Rec	1	5/15/2	2017 10:41:23 PM	
Surr: o-Terphenyl	76.8	50-150		%Rec	1	5/15/2	2017 10:41:23 PM	
Gasoline by NWTPH-Gx				Batch	ID:	17085	Analyst: NG	
Gasoline	ND	4.36		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
Surr: 4-Bromofluorobenzene	99.5	65-135		%Rec	1	5/18/2	2017 5:07:31 PM	
Surr: Toluene-d8	101	65-135		%Rec	1	5/18/2	2017 5:07:31 PM	
Volatile Organic Compounds by Ef	PA Method	<u>8260C</u>		Batch	ID:	17085	Analyst: NG	
Benzene	ND	0.0174		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
Toluene	ND	0.0174		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
Ethylbenzene	ND	0.0262		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
m,p-Xylene	ND	0.0174		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
o-Xylene	ND	0.0174		mg/Kg-dry	1	5/18/2	2017 5:07:31 PM	
Surr: Dibromofluoromethane	92.3	56.5-129		%Rec	1	5/18/2	2017 5:07:31 PM	
Surr: Toluene-d8	97.3	64.5-151		%Rec	1	5/18/2	2017 5:07:31 PM	
Surr: 1-Bromo-4-fluorobenzene	95.9	63.1-141		%Rec	1	5/18/2	2017 5:07:31 PM	
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36134	Analyst: BB	
Percent Moisture	11.7	0.500		wt%	1	5/15/2	2017 12:03:59 PM	



Client: AECOM				Collection	Dat	e: 5/12/20	17 9:00:00 AM
Project: 1001 Minor							
Lab ID: 1705159-002				Matrix: So	oil		
Client Sample ID: UST C - SW 2							
Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed
Diesel and Heavy Oil by NWTPH-D	<u>x/Dx Ext.</u>			Batch	n ID:	17044	Analyst: SB
Diesel (Fuel Oil)	ND	21.6		mg/Kg-dry	1	5/15/	2017 11:12:50 PM
Heavy Oil	ND	54.1		mg/Kg-dry	1	5/15/	2017 11:12:50 PM
Surr: 2-Fluorobiphenyl	99.1	50-150		%Rec	1	5/15/	2017 11:12:50 PM
Surr: o-Terphenyl	96.6	50-150		%Rec	1	5/15/	2017 11:12:50 PM
Gasoline by NWTPH-Gx				Batch	ID:	17085	Analyst: NG
Gasoline	ND	4.54		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
Surr: 4-Bromofluorobenzene	97.4	65-135		%Rec	1	5/18/	2017 8:04:04 AM
Surr: Toluene-d8	101	65-135		%Rec	1	5/18/	2017 8:04:04 AM
Volatile Organic Compounds by El	PA Method	<u>8260C</u>		Batch	ID:	17085	Analyst: NG
Benzene	ND	0.0181		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
Toluene	ND	0.0181		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
Ethylbenzene	ND	0.0272		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
m,p-Xylene	ND	0.0181		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
o-Xylene	ND	0.0181		mg/Kg-dry	1	5/18/	2017 8:04:04 AM
Surr: Dibromofluoromethane	89.2	56.5-129		%Rec	1	5/18/	2017 8:04:04 AM
Surr: Toluene-d8	97.9	64.5-151		%Rec	1	5/18/	2017 8:04:04 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	63.1-141		%Rec	1	5/18/	2017 8:04:04 AM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36134	Analyst: BB
Percent Moisture	12.9	0.500		wt%	1	5/15/	2017 12:03:59 PM



Client: AECOM				Collection	Dat	e: 5/12/20	17 1:30:00 PM
Project: 1001 Minor							
Lab ID: 1705159-003				Matrix: So	oil		
Client Sample ID: UST C - B 1							
Analyses	Result	RL	Qual	Units	DF	= Da	te Analyzed
Diesel and Heavy Oil by NWTPH-I	<u>)x/Dx Ext.</u>			Batch	ID:	17044	Analyst: SB
Diesel (Fuel Oil)	ND	20.9		mg/Kg-dry	1	5/15	/2017 11:44:17 PM
Heavy Oil	ND	52.3		mg/Kg-dry	1	5/15/	/2017 11:44:17 PM
Surr: 2-Fluorobiphenyl	91.0	50-150		%Rec	1	5/15/	/2017 11:44:17 PM
Surr: o-Terphenyl	90.0	50-150		%Rec	1	5/15	/2017 11:44:17 PM
Gasoline by NWTPH-Gx				Batch	ID:	17085	Analyst: NG
Gasoline	ND	4.55		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
Surr: 4-Bromofluorobenzene	98.7	65-135		%Rec	1	5/18	/2017 5:36:17 PM
Surr: Toluene-d8	102	65-135		%Rec	1	5/18	/2017 5:36:17 PM
Volatile Organic Compounds by E	PA Method	<u>8260C</u>		Batch	ID:	17085	Analyst: NG
Benzene	ND	0.0182		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
Toluene	ND	0.0182		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
Ethylbenzene	ND	0.0273		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
m,p-Xylene	ND	0.0182		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
o-Xylene	ND	0.0182		mg/Kg-dry	1	5/18	/2017 5:36:17 PM
Surr: Dibromofluoromethane	90.9	56.5-129		%Rec	1	5/18	/2017 5:36:17 PM
Surr: Toluene-d8	97.5	64.5-151		%Rec	1	5/18	/2017 5:36:17 PM
Surr: 1-Bromo-4-fluorobenzene	95.2	63.1-141		%Rec	1	5/18	/2017 5:36:17 PM
Sample Moisture (Percent Moistu	<u>re)</u>			Batch	ID:	R36134	Analyst: BB
Percent Moisture	10.2	0.500		wt%	1	5/15	/2017 12:03:59 PM



Client: AECOM				Collection	Dat	: e: 5/15/20	17 8:10:00 AM	1
Project: 1001 Minor								
Lab ID: 1705159-004				Matrix: Sc	oil			
Client Sample ID: CT - Bottom								
Analyses	Result	RL	Qual	Units	DF	- Da	te Analyzed	
Diesel and Heavy Oil by NWTPH-I	<u> Dx/Dx Ext.</u>			Batch	ID:	17044	Analyst: SB	
Diesel (Fuel Oil)	ND	22.7		mg/Kg-dry	1	5/16/	2017 12:15:46 AN	Л
Heavy Oil	95.4	56.8		mg/Kg-dry	1	5/16/	2017 12:15:46 AN	Л
Surr: 2-Fluorobiphenyl	85.9	50-150		%Rec	1	5/16/	2017 12:15:46 AN	Л
Surr: o-Terphenyl	80.7	50-150		%Rec	1	5/16/	2017 12:15:46 AN	Л
Gasoline by NWTPH-Gx				Batch	ID:	17047	Analyst: NG	
Gasoline	ND	3.85		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	л
Surr: 4-Bromofluorobenzene	104	65-135		%Rec	1	5/16/	2017 11:42:39 AN	Л
Surr: Toluene-d8	95.5	65-135		%Rec	1	5/16/	2017 11:42:39 AN	Л
Volatile Organic Compounds by E	PA Method	<u>8260C</u>		Batch	ID:	17047	Analyst: NG	
Benzene	ND	0.0154		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	л
Toluene	ND	0.0154		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	Л
Ethylbenzene	ND	0.0231		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	Л
m,p-Xylene	ND	0.0154		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	Л
o-Xylene	ND	0.0154		mg/Kg-dry	1	5/16/	2017 11:42:39 AN	Л
Surr: Dibromofluoromethane	96.0	56.5-129		%Rec	1	5/16/	2017 11:42:39 AN	Л
Surr: Toluene-d8	100	64.5-151		%Rec	1	5/16/	2017 11:42:39 AN	Л
Surr: 1-Bromo-4-fluorobenzene	116	63.1-141		%Rec	1	5/16/	2017 11:42:39 AN	Л
Sample Moisture (Percent Moistu	<u>re)</u>			Batch	ID:	R36134	Analyst: BB	
Percent Moisture	14.5	0.500		wt%	1	5/15/	2017 12:03:59 PN	Л



Client: AECOM				Collection	Dat	: e: 5/15/20	17 8:15:00 AM	
Project: 1001 Minor								
Lab ID: 1705159-005				Matrix: Sc	oil			
Client Sample ID: CT - Stockpile								
Analyses	Result	RL	Qual	Units	DF	= Da	te Analyzed	
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Batch	ID:	17044	Analyst: SB	
Diesel (Fuel Oil)	ND	21.2		mg/Kg-dry	1	5/16/	/2017 12:47:09 AM	I
Heavy Oil	2,190	106	D	mg/Kg-dry	2	5/16/	/2017 8:37:07 AM	
Surr: 2-Fluorobiphenyl	89.3	50-150		%Rec	1	5/16/	/2017 12:47:09 AM	i i
Surr: o-Terphenyl	90.8	50-150		%Rec	1	5/16/	/2017 12:47:09 AM	1
Gasoline by NWTPH-Gx				Batch	ID:	17047	Analyst: NG	
Gasoline	ND	3.82		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	I
Surr: 4-Bromofluorobenzene	97.4	65-135		%Rec	1	5/16/	/2017 12:12:51 PM	i i
Surr: Toluene-d8	103	65-135		%Rec	1	5/16/	/2017 12:12:51 PM	1
Volatile Organic Compounds by	EPA Method	<u>8260C</u>		Batch	ID:	17047	Analyst: NG	
Benzene	ND	0.0153		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	I
Toluene	ND	0.0153		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	1
Ethylbenzene	ND	0.0229		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	i i
m,p-Xylene	ND	0.0153		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	i i
o-Xylene	ND	0.0153		mg/Kg-dry	1	5/16/	/2017 12:12:51 PM	i i
Surr: Dibromofluoromethane	88.0	56.5-129		%Rec	1	5/16/	/2017 12:12:51 PM	i i
Surr: Toluene-d8	99.5	64.5-151		%Rec	1	5/16/	/2017 12:12:51 PM	i
Surr: 1-Bromo-4-fluorobenzene	96.2	63.1-141		%Rec	1	5/16/	/2017 12:12:51 PM	1
Sample Moisture (Percent Moist	ure)			Batch	ID:	R36134	Analyst: BB	
Percent Moisture	16.6	0.500		wt%	1	5/15/	/2017 12:03:59 PM	I



Work Order: 1705 CLIENT: AEC Project: 1001							Diesel a	QC S and Heavy	SUMMAI Oil by NW		
Sample ID MB-17044	SampType: MBI	LK		Units: mg/Kg		Prep Date	e: 5/15/20 1	17	RunNo: 36'	145	
Client ID: MBLKS	Batch ID: 170	44				Analysis Date	e: 5/15/20 1	17	SeqNo: 692	2326	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	18.2		20.00		91.0	50	150				
Surr: o-Terphenyl	17.4		20.00		87.0	50	150				
Sample ID LCS-17044	SampType: LCS	3		Units: mg/Kg		Prep Date	e: 5/15/20 1	17	RunNo: 36'	145	
Client ID: LCSS	Batch ID: 170	44				Analysis Date	e: 5/15/20 1	17	SeqNo: 692	2325	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	502	20.0	500.0	0	100	65	135				
Surr: 2-Fluorobiphenyl	19.4		20.00		97.1	50	150				
Surr: o-Terphenyl	21.8		20.00		109	50	150				
Sample ID 1705119-004/	ADUP SampType: DUF	þ		Units: mg/Kg	-dry	Prep Date	e: 5/15/20 1	17	RunNo: 36'	145	
Client ID: BATCH	Batch ID: 170	44				Analysis Date	e: 5/16/20 1	17	SeqNo: 692	2313	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	34.0						0		30	
Diesel Range Organics (C	12-C24) ND	34.0						97.38	101	30	R
Heavy Oil	141	85.0						219.4	43.4	30	
Surr: 2-Fluorobiphenyl	37.5		34.00		110	50	150		0		
Surr: o-Terphenyl NOTES:	38.8		34.00		114	50	150		0		

R - High RPD observed. The method is in control as indicated by the LCS.

DRO - Indicates the presence of unresolved compounds eluting from dodecane through tetracosane (C12-C24).



CLIENT: A	705159 ECOM 001 Minor								Diesel	QC S and Heavy	SUMMAI Oil by NW		
Sample ID 1705119-	004AMS	SampType	MS			Units: mg	/Kg-dry	Prep Date	e: 5/15/20	17	RunNo: 36	145	
Client ID: BATCH		Batch ID:	17044					Analysis Date	e: 5/16/20	17	SeqNo: 69	2314	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			1,220	33.9	846.6	97.38	133	65	135				
Surr: 2-Fluorobiphe	enyl		47.9		33.87		141	50	150				
Surr: o-Terphenyl			53.0		33.87		156	50	150				S
S - Outlying surrog Sample ID 1705119-		SampType	•	analysis wa	is performed a	Units: mg	-	Prep Date	e: 5/15/20)17	RunNo: 36	145	
Client ID: BATCH	004AlliOD	Batch ID:	17044			onna. mg	/itg-ury	Analysis Date			SeqNo: 69	-	
			-					•			·		
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			1,270	33.9	848.3	97.38	139	65	135	1,224	3.91	30	S
Surr: 2-Fluorobiphe	enyl		42.7		33.93		126	50	150		0		
Surr: o-Terphenyl			46.4		33.93		137	50	150		0		
NOTES: S - Outlying spike r	ecovery(ies) of	bserved. A du	plicate analy	ysis was pe	erformed and r	ecovered within	range.						
Sample ID 1705140-	007ADUP	SampType	DUP			Units: mg	/Kg-dry	Prep Date	e: 5/15/20	17	RunNo: 36	145	
Client ID: BATCH		Batch ID:	17044					Analysis Date	e: 5/17/20	17	SeqNo: 69	2963	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	21.7						0		30	
Heavy Oil			ND	54.3						0		30	
Surr: 2-Fluorobiphe	enyl		21.1		21.70		97.3	50	150		0		



CLIENT: AECOMProject:1001 MinorSample IDLCS-17085SampType: LCSClient ID:LCSSBatch ID:17085AnalyteResultRLSPK valueGasoline29.65.0025.00Surr: Toluene-d81.261.250Surr: 4-Bromofluorobenzene1.231.250	Units: mg/Kg SPK Ref Val 0 Units: mg/Kg	%REC 119 101 98.7	Analysis Date LowLimit 65 65 65 Prep Date	HighLimit 135 135 135 :: 5/17/20	N17 RPD Ref Val	RunNo: 362 SeqNo: 695	5433 RPDLimit	Qual
Client ID:LCSSBatch ID:17085AnalyteResultRLSPK valueGasoline29.65.0025.00Surr: Toluene-d81.261.250	SPK Ref Val 0 Units: mg/Kg	%REC 119 101 98.7	Analysis Date LowLimit 65 65 65 Prep Date	e: 5/18/20 HighLimit 135 135 135 e: 5/17/20	N17 RPD Ref Val	SeqNo: 69! %RPD	5433 RPDLimit	Qual
AnalyteResultRLSPK valueGasoline29.65.0025.00Surr: Toluene-d81.261.250	0 Units: mg/Kg	%REC 119 101 98.7	LowLimit 65 65 65 Prep Date	HighLimit 135 135 135 :: 5/17/20	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline 29.6 5.00 25.00 Surr: Toluene-d8 1.26 1.250	0 Units: mg/Kg	119 101 98.7	65 65 65 Prep Date	135 135 135 : 5/17/20				Qual
Surr: Toluene-d8 1.26 1.250	Units: mg/Kg	101 98.7	65 65 Prep Date	135 135 e: 5/17/20	117	RunNo: 36 2	284	
		98.7	65 Prep Date	135 e: 5/17/20	017	RunNo: 362	284	
Surr: 4-Bromofluorobenzene1.231.250			Prep Date	e: 5/17/20)17	RunNo: 362	284	
)17	RunNo: 362	284	
Sample ID MB-17085 SampType: MBLK	SPK Ref \/al		Analysis Det					
Client ID: MBLKS Batch ID: 17085	SPK Rof Val		Analysis Date	e: 5/18/20	017	SeqNo: 69	5434	
Analyte Result RL SPK value		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline ND 5.00								
Surr: Toluene-d8 1.28 1.250		102	65	135				
Surr: 4-Bromofluorobenzene1.191.250		95.3	65	135				
Sample ID 1705165-006BDUP SampType: DUP	Units: mg/Kg-d	Iry	Prep Date	e: 5/17/20)17	RunNo: 362	284	
Client ID: BATCH Batch ID: 17085			Analysis Date	e: 5/18/20)17	SeqNo: 695	5419	
Analyte Result RL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline ND 5.43					0		30	
Surr: Toluene-d8 1.39 1.357		103	65	135		0		
Surr: 4-Bromofluorobenzene1.311.357		96.8	65	135		0		
Sample ID 1705173-014ADUP SampType: DUP	Units: mg/Kg		Prep Date	e: 5/17/20)17	RunNo: 362	284	
Client ID: BATCH Batch ID: 17085			Analysis Date	e: 5/18/20)17	SeqNo: 69	5429	
Analyte Result RL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline 7.37 3.34					7.450	1.09	30	
Surr: Toluene-d8 0.852 0.8353		102	65	135		0		
Surr: 4-Bromofluorobenzene 0.832 0.8353		99.6	65	135		0		



CLIENT:	1705159 AECOM								QC S	SUMMAI Gasolin	RY REF e by NW1	_
Project: Sample ID 1705173 Client ID: BATCH		SampType: MS Batch ID: 17085			Units: mg/Kg		Prep Dat Analysis Dat			RunNo: 362 SeqNo: 69	284	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Surr: Toluene-d8 Surr: 4-Bromofluo		10.5 0.644 0.625	2.51	12.54 0.6270 0.6270	0	83.5 103 99.6	65 65 65	135 135 135				
Sample ID 170517 Client ID: BATCH Analyte		SampType: MSD Batch ID: 17085 Result	RL	SPK value	Units: mg/Kg	%REC	Prep Dat Analysis Dat LowLimit	te: 5/18/20		RunNo: 362 SeqNo: 699 %RPD		Qual
Gasoline Surr: Toluene-d8 Surr: 4-Bromofluo		10.4 0.636 0.619	2.51	12.54 0.6270 0.6270	0	83.1 101 98.8	65 65 65	135 135 135 135	10.47	0.445 0 0	30	



Work Order:	1705159								2 30	SUMMAI		PORT
CLIENT:	AECOM											-
Project:	1001 Minor									Gasolin	e by NW ⁻	IPH-GX
Sample ID LCS-1	17047	SampType: LCS			Units: mg/Kg		Prep Date	e: 5/15/20)17	RunNo: 36	153	
Client ID: LCSS	;	Batch ID: 17047					Analysis Date	e: 5/15/20)17	SeqNo: 692	2550	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		27.6	5.00	25.00	0	110	65	135				
Surr: Toluene-d	18	1.18		1.250		94.8	65	135				
Surr: 4-Bromofl	uorobenzene	1.27		1.250		102	65	135				
Sample ID MB-17	7047	SampType: MBLK			Units: mg/Kg		Prep Date	e: 5/15/20)17	RunNo: 36	153	
Client ID: MBLK	s	Batch ID: 17047					Analysis Date	e: 5/15/20	017	SeqNo: 692	2551	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	5.00									
Surr: Toluene-d	18	1.17		1.250		93.6	65	135				
Surr: 4-Bromofl	uorobenzene	1.27		1.250		101	65	135				
Sample ID 17051	51-004BDUP	SampType: DUP			Units: mg/Kg-	dry	Prep Date	e: 5/15/20)17	RunNo: 36	153	
Client ID: BATC	н	Batch ID: 17047					Analysis Date	e: 5/16/20)17	SeqNo: 692	2539	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	6.78						0		30	
Surr: Toluene-d	18	1.45		1.695		85.6	65	135		0		
Surr: 4-Bromofl	uorobenzene	1.87		1.695		110	65	135		0		
Sample ID 17051	51-013BMS	SampType: MS			Units: mg/Kg-	dry	Prep Date	e: 5/15/20)17	RunNo: 36	153	
Client ID: BATC	H	Batch ID: 17047					Analysis Date	e: 5/16/20)17	SeqNo: 692	2545	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		215	5.71	28.55	207.3	25.4	65	135				SE
Surr: Toluene-d	18	1.29		1.427		90.4	65	135				
Surr: 4-Bromofle	uorobenzene	1.93		1.427		135	65	135				S



Work Order	: 1705159							(QC SUMMAR		ORT
CLIENT:	AECOM										
Project:	1001 Minor								Gasoline	e by NWT	PH-Gx
Sample ID 170	5151-013BMS	SampType: MS			Units: mg/k	(g-dry	Prep Dat	e: 5/15/2017	RunNo: 361	53	
Client ID: BAT	ГСН	Batch ID: 17047					Analysis Dat	e: 5/16/2017	SeqNo: 692	545	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Re	ef Val %RPD	RPDLimit	Qual

NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID 1705151-013BMSD SampType: MSD			Units: mg/Kg-dry			Prep Da	te: 5/15/20)17	RunNo: 36 '		
Client ID: BATCH	Batch ID: 17047					Analysis Date: 5/16/2017			SeqNo: 692		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	243	5.71	28.55	207.3	127	65	135	214.6	12.6	30	Е
Surr: Toluene-d8	1.41		1.427		99.0	65	135		0		
Surr: 4-Bromofluorobenzene	1.95		1.427		136	65	135		0		S

NOTES:

Original

S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

E - Estimated value. The amount exceeds the linear working range of the instrument.



Work Order:	1705159					0C S	UMMARY REPORT
CLIENT:	AECOM						
Project:	1001 Minor					Sample Mo	isture (Percent Moisture)
Sample ID 17051	43-001ADUP	SampType: DUP			Units: wt%	Prep Date: 5/15/2017	RunNo: 36134
Client ID: BATC	н	Batch ID: R36134				Analysis Date: 5/15/2017	SeqNo: 691982
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		11.3	0.500			10.82	4.68 20
Sample ID 17051	50-004ADUP	SampType: DUP			Units: wt%	Prep Date: 5/15/2017	RunNo: 36134
Client ID: BATC	н	Batch ID: R36134				Analysis Date: 5/15/2017	SeqNo: 691997
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		15.5	0.500			15.53	0.430 20



1001 Minor

Work Order:	1705159
CLIENT:	AECOM

Project:

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-17085	SampType: LCS	SampType: LCS				Prep Da	te: 5/17/20)17	RunNo: 362			
Client ID: LCSS	Batch ID: 17085	atch ID: 17085 Analysis Date: 5/18/2017)17	SeqNo: 695334			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	1.07	0.0200	1.000	0	107	64.3	133					
Toluene	1.06	0.0200	1.000	0	106	67.3	138					
Ethylbenzene	1.06	0.0300	1.000	0	106	74	129					
m,p-Xylene	2.12	0.0200	2.000	0	106	70	124					
o-Xylene	1.06	0.0200	1.000	0	106	68.1	139					
Surr: Dibromofluoromethane	1.07		1.250		85.3	56.5	129					
Surr: Toluene-d8	1.27		1.250		101	64.5	151					
Surr: 1-Bromo-4-fluorobenzene	1.32		1.250		106	63.1	141					

Sample ID MB-17085	SampType: N	IBLK		Units: mg	/Kg	Prep Dat	e: 5/17/20)17	RunNo: 362	283	
Client ID: MBLKS	Batch ID:	17085				Analysis Dat	e: 5/18/20)17	SeqNo: 69	5335	
Analyte	Res	sult	RL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND 0.02	00								
Toluene		ND 0.02	00								
Ethylbenzene		ND 0.03	00								
m,p-Xylene		ND 0.02	00								
o-Xylene		ND 0.02	00								
Surr: Dibromofluoromethane	1	.03	1.250		82.8	56.5	129				
Surr: Toluene-d8	1	.23	1.250		98.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1	.15	1.250		92.2	63.1	141				
Sample ID 1705159-002BMS	SampType:	NS		Units: mg	/Kg-dry	Prep Dat	e: 5/17/2()17	RunNo: 362	283	
Client ID: UST C - SW 2	Batch ID:	17085				Analysis Dat	e: 5/18/20	017	SeqNo: 69	5313	
Analyte	Res	sult	RL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.9	0.01	81 0.9070	0	101	63.5	133				
Toluene	0.8	.01 0.01	81 0.9070	0	98.6	63.4	132				
Ethylbenzene	0.8	.02	72 0.9070	0	98.7	54.5	134				
m,p-Xylene	1	.80 0.01	81 1.814	0	99.1	53.1	132				



Work Order:1705159CLIENT:AECOM						Volatil	Orazni	QC S			
Project: 1001 Minor							-	-	-		1 0200
Sample ID 1705159-002BMS	SampType: MS			Units: mg/ł	(g-dry	Prep Da	ite: 5/17/20)17	RunNo: 362	283	
Client ID: UST C - SW 2	Batch ID: 17085					Analysis Da	ite: 5/18/20)17	SeqNo: 69	5313	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	0.896	0.0181	0.9070	0	98.8	53.3	139				
Surr: Dibromofluoromethane	1.13		1.134		100	56.5	129				
Surr: Toluene-d8	1.16		1.134		103	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.19		1.134		105	63.1	141				
Sample ID 1705159-002BMSD	SampType: MSD			Units: mg/k	(g-dry	Prep Da	ite: 5/17/20)17	RunNo: 362	283	
Client ID: UST C - SW 2	Batch ID: 17085					Analysis Da	ite: 5/18/20)17	SeqNo: 69	5314	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.927	0.0181	0.9070	0	102	63.5	133	0.9163	1.16	30	
Toluene	0.912	0.0181	0.9070	0	101	63.4	132	0.8945	1.92	30	
Ethylbenzene	0.930	0.0272	0.9070	0	103	54.5	134	0.8955	3.77	30	
m,p-Xylene	1.85	0.0181	1.814	0	102	53.1	132	1.798	2.96	30	
o-Xylene	0.929	0.0181	0.9070	0	102	53.3	139	0.8961	3.55	30	
Surr: Dibromofluoromethane	1.10		1.134		97.2	56.5	129		0		
Surr: Toluene-d8	1.15		1.134		101	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.20		1.134		106	63.1	141		0		
Sample ID 1705165-006BDUP	SampType: DUP			Units: mg/ł	(g-dry	Prep Da	ite: 5/17/20)17	RunNo: 362	283	
Client ID: BATCH	Batch ID: 17085					Analysis Da	ite: 5/18/20)17	SeqNo: 69	5319	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0217						0		30	
Toluene	ND	0.0217						0		30	
Ethylbenzene	ND	0.0326						0		30	
m,p-Xylene	ND	0.0217						0		30	
o-Xylene	ND	0.0217						0		30	
Surr: Dibromofluoromethane	1.24		1.357		91.1	56.5	129		0		
Surr: Toluene-d8	1.32		1.357		97.6	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.27		1.357		93.4	63.1	141		0		



Work Order: 7	1705159									00.9	SUMMAI		ORT
CLIENT:	AECOM												
Project:	1001 Minor							Volatile	Organi	c Compour	nds by EP	A Method	1 8260C
Sample ID 1705165	-006BDUP	SampType	DUP			Units: mg/k	(g-dry	Prep Date	: 5/17/20	017	RunNo: 36	283	
Client ID: BATCH		Batch ID:	17085					Analysis Date	: 5/18/2 0	017	SeqNo: 69	5319	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1705173	-014ADUP	SampType	DUP			Units: mg/k	(g	Prep Date	5/17/20	017	RunNo: 36	283	
Client ID: BATCH		Batch ID:	17085					Analysis Date	: 5/18/20	017	SeqNo: 69	5329	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.	.0495	0.0134						0.04734	4.46	30	
Toluene			ND	0.0134						0		30	
Ethylbenzene			ND	0.0200						0		30	
m,p-Xylene		0.	.0350	0.0134						0.03561	1.76	30	
o-Xylene			ND	0.0134						0		30	
Surr: Dibromofluor	omethane	(0.762		0.8353		91.2	56.5	129		0		
Surr: Toluene-d8		(0.843		0.8353		101	64.5	151		0		
Surr: 1-Bromo-4-flu	uorobenzene	(0.790		0.8353		94.5	63.1	141		0		



1705159

AECOM

Project: 1001 Minor

Work Order:

CLIENT:

Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-17047	SampType: LCS			Units: mg/Kg			te: 5/15/20 te: 5/15/20		RunNo: 36		
Client ID: LCSS	Batch ID: 17047					Analysis Da	2466				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.20	0.0200	1.000	0	120	64.3	133				
Toluene	1.17	0.0200	1.000	0	117	67.3	138				
Ethylbenzene	1.03	0.0300	1.000	0	103	74	129				
m,p-Xylene	2.01	0.0200	2.000	0	100	70	124				
o-Xylene	0.999	0.0200	1.000	0	99.9	68.1	139				
Surr: Dibromofluoromethane	1.39		1.250		111	56.5	129				
Surr: Toluene-d8	1.50		1.250		120	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.38		1.250		110	63.1	141				

Sample ID MB-17047	SampType: MBLK			Units: mg/Kg		Prep Date:	5/15/2017	RunNo: 36152	
Client ID: MBLKS	Batch ID: 17047					Analysis Date:	5/15/2017	SeqNo: 692467	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit RPD Ref V	al %RPD RPDLimit	Qual
Benzene	ND	0.0200							
Toluene	ND	0.0200							
Ethylbenzene	ND	0.0300							
m,p-Xylene	ND	0.0200							
o-Xylene	ND	0.0200							
Surr: Dibromofluoromethane	1.32		1.250		105	56.5	129		
Surr: Toluene-d8	1.43		1.250		114	64.5	151		
Surr: 1-Bromo-4-fluorobenzene	1.28		1.250		102	63.1	141		
Sample ID 1705134-001BDUP	SampType: DUP			Units: mg/Kg-d	ry	Prep Date:	5/15/2017	RunNo: 36152	
Client ID: BATCH	Batch ID: 17047					Analysis Date:	5/15/2017	SeqNo: 692448	
A 1.			0.01/						- ·

Analyte	Result	RL	SPK value SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0110					0		30	
Toluene	ND	0.0110					0		30	
Ethylbenzene	ND	0.0165					0		30	
m,p-Xylene	ND	0.0110					0		30	



Work Order: 1705159)							2.00	SUMMAR		POR.
CLIENT: AECOM								• -			-
Project: 1001 Min	nor					Volatile	Organi	c Compour	nds by EP/	A Method	1 8260
Sample ID 1705134-001BDU	SampType: DUP			Units: mg/	/Kg-dry	Prep Date	e: 5/15/20	17	RunNo: 36 1	152	
Client ID: BATCH	Batch ID: 17047					Analysis Date	e: 5/15/20	17	SeqNo: 692	2448	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0110						0		30	
Surr: Dibromofluoromethane	0.662		0.6879		96.3	56.5	129		0		
Surr: Toluene-d8	0.588		0.6879		85.4	64.5	151		0		
Surr: 1-Bromo-4-fluorobenze	ene 0.740		0.6879		108	63.1	141		0		
Sample ID 1705151-004BDU	SampType: DUP			Units: mg /	/Kg-dry	Prep Date	e: 5/15/20)17	RunNo: 36 1	152	
Client ID: BATCH	Batch ID: 17047					Analysis Date	e: 5/16/20	17	SeqNo: 692	2457	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0271						0		30	
Toluene	ND	0.0271						0		30	
Ethylbenzene	ND	0.0407						0		30	
m,p-Xylene	ND	0.0271						0		30	
o-Xylene	ND	0.0271						0		30	
Surr: Dibromofluoromethane	1.66		1.695		97.8	56.5	129		0		
Surr: Toluene-d8	1.68		1.695		98.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenze	ene 1.64		1.695		96.6	63.1	141		0		
Sample ID 1705150-002BMS	SampType: MS			Units: mg /	/Kg-dry	Prep Date	e: 5/15/20)17	RunNo: 36 1	152	
Client ID: BATCH	Batch ID: 17047					Analysis Date	e: 5/16/20	17	SeqNo: 692	2901	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.933	0.0205	1.026	0	90.9	63.5	133				
Toluene	0.953	0.0205	1.026	0	92.8	63.4	132				
Ethylbenzene	0.972	0.0308	1.026	0	94.7	54.5	134				
m,p-Xylene	1.99	0.0205	2.052	0	97.0	53.1	132				
o-Xylene	0.973	0.0205	1.026	0	94.8	53.3	139				
Surr: Dibromofluoromethane	1.15		1.283		89.9	56.5	129				
Surr: Toluene-d8	1.37		1.283		107	64.5	151				
Surr: 1-Bromo-4-fluorobenze	ene 1.42		1.283		111	63.1	141				



	5159								QC S	SUMMA		PORT
CLIENT: AEC	COM							- ·	•			-
Project: 1001	1 Minor						Volatile	organi	c Compour	nds by EP	A Method	82600
Sample ID 1705150-002	BMS	SampType: MS			Units: mg/	Kg-dry	Prep Dat	e: 5/15/2	017	RunNo: 36	152	
Client ID: BATCH		Batch ID: 17047					Analysis Dat	e: 5/16/2 0	017	SeqNo: 69	2901	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1705150-002	BMSD	SampType: MSD			Units: mg/	Kg-dry	Prep Dat	e: 5/15/2	017	RunNo: 36	152	
Client ID: BATCH		Batch ID: 17047					Analysis Dat	e: 5/16/2	017	SeqNo: 69	2902	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		1.08	0.0205	1.026	0	105	63.5	133	0.9328	14.3	30	
Toluene		1.04	0.0205	1.026	0	101	63.4	132	0.9527	8.68	30	
Ethylbenzene		0.923	0.0308	1.026	0	89.9	54.5	134	0.9724	5.25	30	
m,p-Xylene		1.77	0.0205	2.052	0	86.1	53.1	132	1.992	11.9	30	
o-Xylene		0.838	0.0205	1.026	0	81.6	53.3	139	0.9728	14.9	30	
Surr: Dibromofluoromet	thane	1.33		1.283		104	56.5	129		0		
Surr: Toluene-d8		1.37		1.283		107	64.5	151		0		
Surr: 1-Bromo-4-fluorot	penzene	1.36		1.283		106	63.1	141		0		

Original



Sample Log-In Check List

Work Order Numb	per: 1705159		
Date Received:	5/15/2017	9:05:00 AM	
Yes 🖌	No 🗌	Not Present	
<u>Client</u>			
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes	No 🗌	Not Required 🗹	
Yes 🖌	No 🗌	NA 🗌	
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes	No 🗸	NA 🗌	
Yes	No 🗌	NA 🔽	
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes 🖌	No 🗌		
Yes 🗹	No 🗌		
Yes	No 🗌	NA 🗹	
e			
eMail 🗌 Ph	one 🗌 Fax	In Person	
	Ves Ves Client Yes Yes	Yes ✓ No Client No □ Yes ✓ No □	Date Received: 5/15/2017 9:05:00 AM Yes No Not Present Client No NA Yes No NA

Item Information

Item #	Temp ^o C
Cooler	5.3
Sample	6.0

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Received	www.fremontanalytical.com
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	Tel: 206-352-3790 Date:
Seattle WA SEATTLE WAS SEATTLE WA	3600 Fremont Ave N.



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Work Order Number: 1705228

May 25, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 3 sample(s) on 5/18/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohal c. Rady

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor 1705228	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1705228-001	USTD-SW1	05/18/2017 11:10 AM	05/18/2017 12:47 PM
1705228-002	USTD-SW2	05/18/2017 11:25 AM	05/18/2017 12:47 PM
1705228-003	USTD-B1	05/18/2017 11:45 AM	05/18/2017 12:47 PM



Case Narrative

WO#: **1705228** Date: **5/25/2017**

CLIENT: AECOM Project: 1001 Minor

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1705228** Date Reported: **5/25/2017**

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



 Work Order:
 1705228

 Date Reported:
 5/25/2017

Client: AECOM				Collection	Dat	t e: 5/18/2017 11:10:00 AM
Project: 1001 Minor						
Lab ID: 1705228-001				Matrix: Sc	sil	
Client Sample ID: USTD-SW1					,	
-	Result	RL	Qual	Units	DF	Data Analyzad
Analyses	Result	RL	Qual	Units	Dr	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	<u>(/Dx Ext.</u>			Batch	ID:	17103 Analyst: SB
Diesel (Fuel Oil)	ND	21.6		mg/Kg-dry	1	5/24/2017 2:50:15 PM
Heavy Oil	ND	53.9		mg/Kg-dry	1	5/24/2017 2:50:15 PM
Surr: 2-Fluorobiphenyl	75.1	50-150		%Rec	1	5/24/2017 2:50:15 PM
Surr: o-Terphenyl	96.5	50-150		%Rec	1	5/24/2017 2:50:15 PM
Gasoline by NWTPH-Gx				Batch	ID:	17149 Analyst: NG
Gasoline	ND	5.28		mg/Kg-dry	1	5/24/2017 3:01:47 PM
Surr: 4-Bromofluorobenzene	92.8	65-135		%Rec	1	5/24/2017 3:01:47 PM
Surr: Toluene-d8	96.9	65-135		%Rec	1	5/24/2017 3:01:47 PM
Volatile Organic Compounds by EP	A Method	<u>8260C</u>		Batch	ID:	17149 Analyst: NG
Benzene	ND	0.0211		mg/Kg-dry	1	5/24/2017 3:01:47 PM
Toluene	ND	0.0211		mg/Kg-dry	1	5/24/2017 3:01:47 PM
Ethylbenzene	ND	0.0317		mg/Kg-dry	1	5/24/2017 3:01:47 PM
m,p-Xylene	ND	0.0211		mg/Kg-dry	1	5/24/2017 3:01:47 PM
o-Xylene	ND	0.0211		mg/Kg-dry	1	5/24/2017 3:01:47 PM
Surr: Dibromofluoromethane	97.7	56.5-129		%Rec	1	5/24/2017 3:01:47 PM
Surr: Toluene-d8	101	64.5-151		%Rec	1	5/24/2017 3:01:47 PM
Surr: 1-Bromo-4-fluorobenzene	87.0	63.1-141		%Rec	1	5/24/2017 3:01:47 PM
Sample Moisture (Percent Moisture				Batch	ID:	R36266 Analyst: BB
Percent Moisture	8.30	0.500		wt%	1	5/19/2017 11:03:47 AM

Original



Client: AECOM				Collection	Dat	: e: 5/18/20	17 11:25:00 AM	
Project: 1001 Minor								
Lab ID: 1705228-002				Matrix: So	DII			
Client Sample ID: USTD-SW2								
Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed	
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	n ID:	17103	Analyst: SB	
Diesel (Fuel Oil)	ND	20.4		mg/Kg-dry	1	5/24/	2017 3:22:09 PM	
Heavy Oil	ND	51.1		mg/Kg-dry	1	5/24/	2017 3:22:09 PM	
Surr: 2-Fluorobiphenyl	77.0	50-150		%Rec	1	5/24/	2017 3:22:09 PM	
Surr: o-Terphenyl	97.6	50-150		%Rec	1	5/24/	2017 3:22:09 PM	
Gasoline by NWTPH-Gx				Batch	n ID:	17149	Analyst: NG	
Gasoline	ND	5.19		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
Surr: 4-Bromofluorobenzene	95.1	65-135		%Rec	1	5/24/	2017 3:31:43 PM	
Surr: Toluene-d8	98.2	65-135		%Rec	1	5/24/	2017 3:31:43 PM	
Volatile Organic Compounds by El	PA Method	<u>8260C</u>		Batch	n ID:	17149	Analyst: NG	
Benzene	ND	0.0208		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
Toluene	ND	0.0208		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
Ethylbenzene	ND	0.0311		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
m,p-Xylene	ND	0.0208		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
o-Xylene	ND	0.0208		mg/Kg-dry	1	5/24/	2017 3:31:43 PM	
Surr: Dibromofluoromethane	98.5	56.5-129		%Rec	1	5/24/	2017 3:31:43 PM	
Surr: Toluene-d8	101	64.5-151		%Rec	1	5/24/	2017 3:31:43 PM	
Surr: 1-Bromo-4-fluorobenzene	89.3	63.1-141		%Rec	1	5/24/	2017 3:31:43 PM	
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	n ID:	R36266	Analyst: BB	
Percent Moisture	17.8	0.500		wt%	1	5/19/	2017 11:03:47 AM	



Client: AECOM				Collection	Dat	: e: 5/18/20	17 11:45:00 AM	
Project: 1001 Minor				Matria 0				
Lab ID: 1705228-003				Matrix: So	bil			
Client Sample ID: USTD-B1								
Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed	
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	ID:	17103	Analyst: SB	
Diesel (Fuel Oil)	ND	20.8		mg/Kg-dry	1	5/24/2	2017 3:54:08 PM	
Heavy Oil	ND	52.1		mg/Kg-dry	1	5/24/2	2017 3:54:08 PM	
Surr: 2-Fluorobiphenyl	77.1	50-150		%Rec	1	5/24/2	2017 3:54:08 PM	
Surr: o-Terphenyl	96.5	50-150		%Rec	1	5/24/2	2017 3:54:08 PM	
Gasoline by NWTPH-Gx				Batch	ID:	17149	Analyst: NG	
Gasoline	ND	4.37		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
Surr: 4-Bromofluorobenzene	93.0	65-135		%Rec	1	5/24/2	2017 4:01:40 PM	
Surr: Toluene-d8	95.5	65-135		%Rec	1	5/24/2	2017 4:01:40 PM	
Volatile Organic Compounds by EF	PA Method	<u>8260C</u>		Batch	ID:	17149	Analyst: NG	
Benzene	ND	0.0175		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
Toluene	ND	0.0175		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
Ethylbenzene	ND	0.0262		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
m,p-Xylene	ND	0.0175		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
o-Xylene	ND	0.0175		mg/Kg-dry	1	5/24/2	2017 4:01:40 PM	
Surr: Dibromofluoromethane	97.8	56.5-129		%Rec	1	5/24/2	2017 4:01:40 PM	
Surr: Toluene-d8	101	64.5-151		%Rec	1	5/24/2	2017 4:01:40 PM	
Surr: 1-Bromo-4-fluorobenzene	86.9	63.1-141		%Rec	1	5/24/2	2017 4:01:40 PM	
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36266	Analyst: BB	
Percent Moisture	11.0	0.500		wt%	1	5/19/2	2017 11:03:47 AM	



CLIENT:	1705228 AECOM 1001 Minor								Diesel	QC S and Heavy	SUMMA Oil by NW		-
Sample ID MB-171	03	SampType	: MBLK			Units: mg/Kg		Prep Date	e: 5/18/20	17	RunNo: 362	270	
Client ID: MBLKS	;	Batch ID:	17103					Analysis Date	e: 5/19/20	17	SeqNo: 69	5064	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.0									
Heavy Oil			ND	50.0									
Surr: 2-Fluorobiph	•		18.4		20.00		92.2	50	150				
Surr: o-Terphenyl			20.3		20.00		102	50	150				
Sample ID LCS-17	103	SampType	: LCS			Units: mg/Kg		Prep Date	e: 5/18/20	17	RunNo: 362	270	
Client ID: LCSS		Batch ID:	17103					Analysis Date	e: 5/19/20	17	SeqNo: 69	5063	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			505	20.0	500.0	0	101	65	135				
Surr: 2-Fluorobiph	nenyl		19.3		20.00		96.7	50	150				
Surr: o-Terphenyl			21.9		20.00		110	50	150				
Sample ID 1705234	4-001ADUP	SampType	: DUP			Units: mg/Kg	-dry	Prep Date	e: 5/18/20	17	RunNo: 362	270	
Client ID: BATCH		Batch ID:	17103					Analysis Date	e: 5/19/20	17	SeqNo: 69	5048	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.5						0		30	
Heavy Oil			113	51.3						49.43	78.2	30	R
Surr: 2-Fluorobiph	nenyl		18.4		20.51		89.5	50	150		0		
Surr: o-Terphenyl	l		20.3		20.51		98.8	50	150		0		
NOTES: R - High RPD due	e to suspected sa	ample inhom	ogeneity. Th	e method is	in control as	indicated by the Lab	oratory Co	ontrol Sample	(LCS).				
Sample ID 1705234	4-001AMS	SampType	: MS			Units: mg/Kg	-dry	Prep Date	e: 5/18/20	17	RunNo: 362	270	
Client ID: BATCH		Batch ID:	17103					Analysis Date	e: 5/19/20	17	SeqNo: 69	5049	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			450	20.5	512.3	0	87.8	65	135				
, ,	nenyl		18.5		20.49		90.4	50	150				



CLIENT:	1705228 AECOM 1001 Minor								Diesel	QC S and Heavy	SUMMAI Oil by NW		-
Sample ID 1705234	-001AMS	SampType	: MS			Units: mg	/Kg-dry	Prep Dat	te: 5/18/20	017	RunNo: 362	270	
Client ID: BATCH		Batch ID:	17103					Analysis Dat	te: 5/19/20	017	SeqNo: 69	5049	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl			23.0		20.49		112	50	150				
Sample ID 1705234	-001AMSD	SampType	MSD			Units: mg	/Kg-dry	Prep Dat	te: 5/18/20	017	RunNo: 362	270	
Client ID: BATCH		Batch ID:	17103					Analysis Dat	te: 5/19/20	017	SeqNo: 69	5050	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			436	20.7	518.3	0	84.1	65	135	449.6	3.13	30	
Surr: 2-Fluorobiph	enyl		19.1		20.73		92.4	50	150		0		
Surr: o-Terphenyl			22.5		20.73		109	50	150		0		
Sample ID 1705228	-001ADUP	SampType	: DUP			Units: mg	/Kg-dry	Prep Dat	te: 5/18/2 0	017	RunNo: 362	270	
Client ID: USTD-S	W1	Batch ID:	17103					Analysis Dat	te: 5/24/2 0	017	SeqNo: 69	7737	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	18.7						0		30	
Heavy Oil			ND	46.6						0		30	
Surr: 2-Fluorobiph	enyl		14.2		18.66		76.2	50	150		0		
Surr: o-Terphenyl			20.3		18.66		109	50	150		0		

Original



Work Order: CLIENT: Project:	1705228 AECOM 1001 Minor									QC S	SUMMAI Gasolin	RY REF e by NW ⁻	_
Sample ID LCS-1	7149	SampType:	LCS			Units: mg/Kg		Prep Date	e: 5/23/20	17	RunNo: 36	371	
Client ID: LCSS		Batch ID:	17149					Analysis Date	e: 5/24/20	17	SeqNo: 69	7397	
Analyte		Re	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			25.8	5.00	25.00	0	103	65	135				
Surr: Toluene-d8	В		1.15		1.250		91.7	65	135				
Surr: 4-Bromoflu	lorobenzene		1.23		1.250		98.6	65	135				
Sample ID MB-17	/149	SampType:	MBLK			Units: mg/Kg		Prep Date	e: 5/23/20	17	RunNo: 36	371	
Client ID: MBLK	S	Batch ID:	17149					Analysis Date	e: 5/24/20	17	SeqNo: 69	7398	
Analyte		Re	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	5.00									
Surr: Toluene-d8	В		1.17		1.250		93.6	65	135				
Surr: 4-Bromoflu	uorobenzene		1.09		1.250		87.2	65	135				
Sample ID 17052	02-001BDUP	SampType:	DUP			Units: mg/Kg	-dry	Prep Date	e: 5/23/20	17	RunNo: 36	371	
Client ID: BATCI	н	Batch ID:	17149					Analysis Date	e: 5/24/20	17	SeqNo: 69	7381	
Analyte		Re	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	7.96						0		30	
Surr: Toluene-d8	В		1.91		1.989		96.2	65	135		0		
Surr: 4-Bromoflu	lorobenzene		1.82		1.989		91.4	65	135		0		
Sample ID 17052	02-023BMS	SampType:	MSD			Units: mg/Kg	-dry	Prep Date	e: 5/23/20	17	RunNo: 36	371	
Client ID: BATCI	н	Batch ID:	17149					Analysis Date	e: 5/24/20	17	SeqNo: 69	7391	
Analyte		Re	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			20.2	6.22	31.08	0	65.1	65	135				
Surr: Toluene-d8	8		1.50		1.554		96.7	65	135				
Surr: 4-Bromoflu	uorobenzene		1.56		1.554		101	65	135				



Work Order: CLIENT: Project:	1705228 AECOM 1001 Minor								QC S	SUMMA Gasoline	RY REF e by NW1	-
Sample ID 1705202-023BMSD Client ID: BATCH		SampType: MSD Batch ID: 17149		Units: mg/Kg-dry			Prep Date: 5/23/2017 Analysis Date: 5/24/2017			RunNo: 36371 SeqNo: 697392		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		9.80	6.22	31.08	0	31.5	65	135				SI
Surr: Toluene-d8		1.52		1.554		97.5	65	135				I
Surr: 4-Bromofl NOTES:	uorobenzene	1.65		1.554		106	65	135				I

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria. A duplicate analysis was performed and recovered within range.

Sample ID 1705202-026BDUP	SampType: DUP			Units: mg/Kg-dry Prep Date: 5/23/2017					RunNo: 36371		
Client ID: BATCH	Batch ID: 17149					Analysis Date: 5/24/2017			SeqNo: 697394		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	7.95						0		30	
Surr: Toluene-d8	1.92	1.988			96.6	65	135	0			
Surr: 4-Bromofluorobenzene	1.86		1.988		93.8	65	135		0		



Work Order:	1705228						2.00	SUMMAF		ORT
CLIENT:	AECOM									-
Project:	1001 Minor						Sample Mo	Disture (Pe	ercent Mo	isture)
Sample ID 17052	28-003ADUP	SampType: DUP			Units: wt%	Prep Date:	5/19/2017	RunNo: 362	266	
Client ID: USTD	-B1	Batch ID: R36266				Analysis Date:	5/19/2017	SeqNo: 694	981	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		11.3	0.500				11.04	2.47	20	
Sample ID 17052	30-047ADUP	SampType: DUP			Units: wt%	Prep Date:	5/19/2017	RunNo: 362	266	
Client ID: BATC	н	Batch ID: R36266				Analysis Date:	5/19/2017	SeqNo: 694	991	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		16.4	0.500				18.38	11.6	20	

Analytical	Fremont
	Analytical

Work Order: 1705228 CLIENT: AECOM Project: 1001 Minor						Volatile (Organic	QC S Compour	SUMMA Inds by EP		-
Sample ID LCS-17149	SampType: LCS			Units: mg/Kg		Prep Date:	5/23/201	7	RunNo: 36	370	
Client ID: LCSS	Batch ID: 17149					Analysis Date:	5/24/201	7	SeqNo: 69	7320	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.02	0.0200	1.000	0	102	64.3	133				
Toluene	1.10	0.0200	1.000	0	110	67.3	138				
Ethylbenzene	1.06	0.0300	1.000	0	106	74	129				
m,p-Xylene	2.24	0.0200	2.000	0	112	70	124				
o-Xylene	1.14	0.0200	1.000	0	114	68.1	139				
Surr: Dibromofluoromethane	1.27		1.250		102	56.5	129				
Surr: Toluene-d8	1.25		1.250		100	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.35		1.250		108	63.1	141				
Sample ID MB-17149	SampType: MBLK			Units: mg/Kg		Prep Date:	5/23/201	7	RunNo: 36	370	
Client ID: MBLKS	Batch ID: 17149					Analysis Date:	5/24/201	7	SeqNo: 69	7321	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.26		1.250		101	56.5	129				
Surr: Toluene-d8	1.16		1.250		93.2	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.03		1.250		82.2	63.1	141				
Sample ID 1705202-001BDUP	SampType: DUP			Units: mg/Kg-	dry	Prep Date:	5/23/201	7	RunNo: 36	370	
Client ID: BATCH	Batch ID: 17149					Analysis Date:	5/24/201	7	SeqNo: 69	7303	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0318						0		30	
Toluene	ND	0.0318						0		30	
Ethylbenzene	ND	0.0477						0		30	
m,p-Xylene	ND	0.0318						0		30	



Work Order: 1705228 CLIENT: AECOM								QC S	SUMMAI	RY REF	POR
Project: 1001 Minor						Volatile	e Organi	c Compour	nds by EP/	A Method	8260
Sample ID 1705202-001BDUP	SampType: DUP			Units: mg/ł	(g-dry	Prep Da	te: 5/23/20	017	RunNo: 36:	370	
Client ID: BATCH	Batch ID: 17149					Analysis Da	te: 5/24/20	017	SeqNo: 69	7303	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0318						0		30	
Surr: Dibromofluoromethane	1.95		1.989		98.0	56.5	129		0		
Surr: Toluene-d8	2.04		1.989		103	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.71		1.989		85.8	63.1	141		0		
Sample ID 1705202-020BMS	SampType: MS			Units: mg/ł	(g-dry	Prep Da	te: 5/23/20	017	RunNo: 36	370	
Client ID: BATCH	Batch ID: 17149			-		Analysis Da	te: 5/24/20	017	SeqNo: 69	7312	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.912	0.0197	0.9827	0	92.8	63.5	133				
Toluene	0.958	0.0197	0.9827	0	97.5	63.4	132				
Ethylbenzene	0.944	0.0295	0.9827	0	96.1	54.5	134				
m,p-Xylene	1.90	0.0197	1.965	0	96.8	53.1	132				
o-Xylene	0.895	0.0197	0.9827	0	91.1	53.3	139				
Surr: Dibromofluoromethane	1.23		1.228		100	56.5	129				
Surr: Toluene-d8	1.34		1.228		109	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.228		107	63.1	141				
Sample ID 1705202-020BMSD	SampType: MSD			Units: mg/k	(g-dry	Prep Da	te: 5/23/2	017	RunNo: 36	370	
Client ID: BATCH	Batch ID: 17149					Analysis Da	te: 5/24/20	017	SeqNo: 697	7313	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.859	0.0197	0.9827	0	87.4	63.5	133	0.9122	6.06	30	
Toluene	0.869	0.0197	0.9827	0	88.5	63.4	132	0.9577	9.65	30	
Ethylbenzene	0.857	0.0295	0.9827	0	87.3	54.5	134	0.9443	9.65	30	
m,p-Xylene	1.73	0.0197	1.965	0	87.8	53.1	132	1.903	9.75	30	
o-Xylene	0.838	0.0197	0.9827	0	85.3	53.3	139	0.8953	6.58	30	
Surr: Dibromofluoromethane	1.21		1.228		98.6	56.5	129		0		
Surr: Toluene-d8	1.33		1.228		108	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.31		1.228		106	63.1	141		0		



Work Order: CLIENT: Project:	1705228 AECOM 1001 Minor						Volatile	Organi	QC S c Compoun	SUMMAI		
Sample ID 170520	2-020BMSD	SampType: MSD			Units: mg/	/Kg-dry	Prep Date	e: 5/23/2	017	RunNo: 36	370	
Client ID: BATCH	1	Batch ID: 17149					Analysis Date	e: 5/24/2	017	SeqNo: 69	7313	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 170520	02-026BDUP	SampType: DUP			Units: mg /	/Kg-dry	Prep Date	e: 5/23/2 0	017	RunNo: 36	370	
Client ID: BATCH	1	Batch ID: 17149					Analysis Date	e: 5/24/2	017	SeqNo: 697	7316	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.0318						0		30	
Toluene		ND	0.0318						0		30	
Ethylbenzene		ND	0.0477						0		30	
m,p-Xylene		ND	0.0318						0		30	
o-Xylene		ND	0.0318						0		30	
Surr: Dibromoflu	oromethane	1.96		1.988		98.4	56.5	129		0		
Surr: Toluene-d8	}	2.01		1.988		101	64.5	151		0		
Surr: 1-Bromo-4-	fluorobenzene	1.75		1.988		88.0	63.1	141		0		



Sample Log-In Check List

CI	ient Name:	URS	Work O	der Numbe	r: 1705228		
Lo	ogged by:	Chelsea Ward	Date Re	ceived:	5/18/201	7 12:47:00 PM	
<u>Cha</u>	in of Custo	ody					
1.	Is Chain of C	ustody complete?	Yes		No 🗌	Not Present	
2.	How was the	sample delivered?	<u>Clien</u>	<u>t</u>			
<u>Log</u>	In						
-	Coolers are p	present?	Yes	✓	No 🗌	NA	
			Maa				
		tainer/cooler in good condition?	Yes		No 🗌		
5.		s present on shipping container/cooler? ments for Custody Seals not intact)	Yes		No 🗌	Not Required	✓
6.	Was an atten	npt made to cool the samples?	Yes	✓	No 🗌	NA	
7.	Were all item	s 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 san	nple volume for indicated test(s)?	Yes	✓	No 🗌		
10.	Are samples	properly preserved?	Yes	✓	No 🗌		
11.	Was preserva	ative added to bottles?	Yes		No 🗹	NA	
12.	Is there head	space in the VOA vials?	Yes		No 🗌	NA	✓
13.	Did all sample	es containers arrive in good condition(unbroken)?	Yes		No 🗌		
14.	Does paperw	ork match bottle labels?	Yes	✓	No 🗌		
15.	Are matrices	correctly identified on Chain of Custody?	Yes	✓	No 🗌		
16.	Is it clear what	at analyses were requested?	Yes	✓	No 🗌		
17.	Were all hold	ing times able to be met?	Yes	✓	No 🗌		
<u>Spe</u>	cial Handli	ing (if applicable)					
18.	Was client no	otified of all discrepancies with this order?	Yes		No 🗌	NA	✓
	Person	Notified: Date					
	By Who	m: Via:	eMa	il 🗌 Phor	ne 🗌 Fax	In Person	
	Regardi	ng:					
	Client In	structions:					
19.	Additional rer	narks:					

Item Information

Item #	Temp °C
Cooler	5.0
Sample	5.9
Temp Blank	4.6

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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Comments	coc 1.2 - 2.22.17 www.fremontanalytical.com	0	x S-12-17 1250 x X Qefec 5/18/17 12:47	s Agreement with Fremont Anal is Agreement.	Tennacont that I and a second state Bromide O-Phosphate Fluoride Nitrate+Nitrite	MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K	IQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water,					6			x x 5 5hil 7 18-0150	2 USTO-SWZ 1 1125 5 × ×	×	Sample Name Sample Samp	nics (Statutes)	Fax: PM Email: david, ravbrogel @ Actan. con	Telephone: Dob - 438-2 Report To (PM): D2v1d Report To (PM): Report To (PM):	city, state zip: Ser He, WA 9801 Location: Ser He, WK	Address: 11/1 3rd Are Ste 1600 collected by: Demetria Cele :: 1/2	Client: AECOM Project No:	t Name: 1001 Mirov Special Remarks:	Tel: 206-352-3790 Date: 5-18-17 Page: of:	Seattle, WA 98103
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3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Ave Work Order Number: 1706036

June 12, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 2 sample(s) on 6/5/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohl c. Redy

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor Ave 1706036	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1706036-001	SP-1	06/02/2017 2:10 PM	06/05/2017 12:39 PM
1706036-002	SP-2	06/02/2017 2:00 PM	06/05/2017 12:39 PM



Case Narrative

WO#: **1706036** Date: **6/12/2017**

CLIENT: AECOM Project: 1001 Minor Ave

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1706036** Date Reported: **6/12/2017**

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



 Work Order:
 1706036

 Date Reported:
 6/12/2017

Client: AECOM				Collection	Dat	e: 6/2/201	7 2:10:00 PM
Project: 1001 Minor Ave							
_ab ID: 1706036-001				Matrix: So	oil		
Client Sample ID: SP-1							
Analyses	Result	RL	Qual	Units	DF	- Da	te Analyzed
Diesel and Heavy Oil by NWTPH-	Dx/Dx Ext.			Batch	ID:	17273	Analyst: SB
Diesel (Fuel Oil)	808	18.7		mg/Kg-dry	1	6/7/2	017 12:45:08 PM
Heavy Oil	ND	46.7		mg/Kg-dry	1	6/7/2	017 12:45:08 PM
Surr: 2-Fluorobiphenyl	105	50-150		%Rec	1	6/7/2	017 12:45:08 PM
Surr: o-Terphenyl	111	50-150		%Rec	1	6/7/2	017 12:45:08 PM
Gasoline by NWTPH-Gx				Batch	ID:	17265	Analyst: NG
Gasoline	ND	4.91		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
Surr: 4-Bromofluorobenzene	113	65-135		%Rec	1	6/6/2	017 9:45:11 AM
Surr: Toluene-d8	93.3	65-135		%Rec	1	6/6/2	017 9:45:11 AM
Volatile Organic Compounds by	EPA Method	<u>8260C</u>		Batch	ID:	17265	Analyst: NG
Benzene	ND	0.0197		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
Toluene	ND	0.0197		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
Ethylbenzene	ND	0.0295		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
m,p-Xylene	0.0696	0.0197		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
o-Xylene	ND	0.0197		mg/Kg-dry	1	6/6/2	017 9:45:11 AM
Surr: Dibromofluoromethane	87.2	56.5-129		%Rec	1	6/6/2	017 9:45:11 AM
Surr: Toluene-d8	105	64.5-151		%Rec	1	6/6/2	017 9:45:11 AM
Surr: 1-Bromo-4-fluorobenzene	103	63.1-141		%Rec	1	6/6/2	017 9:45:11 AM
Sample Moisture (Percent Moistu	ure)			Batch	ID:	R36616	Analyst: BB
Percent Moisture	9.56	0.500		wt%	1	6/6/2	017 10:49:18 AM



 Work Order:
 1706036

 Date Reported:
 6/12/2017

Client: AECOM				Collection	Dat	e: 6/2/2017 2:00:00 PM
Project: 1001 Minor Ave Lab ID: 1706036-002				Matrix: So	il	
Client Sample ID: SP-2 Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	ID:	17273 Analyst: SB
Diesel (Fuel Oil)	584	20.2		mg/Kg-dry	1	6/7/2017 1:15:00 PM
Heavy Oil	ND	50.5		mg/Kg-dry	1	6/7/2017 1:15:00 PM
Surr: 2-Fluorobiphenyl	110	50-150		%Rec	1	6/7/2017 1:15:00 PM
Surr: o-Terphenyl	116	50-150		%Rec	1	6/7/2017 1:15:00 PM
Gasoline by NWTPH-Gx				Batch	ID:	17265 Analyst: NG
Gasoline	ND	5.32		mg/Kg-dry	1	6/6/2017 10:13:50 AM
Surr: 4-Bromofluorobenzene	114	65-135		%Rec	1	6/6/2017 10:13:50 AM
Surr: Toluene-d8	96.1	65-135		%Rec	1	6/6/2017 10:13:50 AM
Volatile Organic Compounds by EF	PA Method	<u>8260C</u>		Batch	ID:	17265 Analyst: NG
Benzene	ND	0.0213		mg/Kg-dry	1	6/6/2017 10:13:50 AM
Toluene	ND	0.0213		mg/Kg-dry	1	6/6/2017 10:13:50 AM
Ethylbenzene	ND	0.0319		mg/Kg-dry	1	6/6/2017 10:13:50 AM
m,p-Xylene	0.0436	0.0213		mg/Kg-dry	1	6/6/2017 10:13:50 AM
o-Xylene	ND	0.0213		mg/Kg-dry	1	6/6/2017 10:13:50 AM
Surr: Dibromofluoromethane	86.7	56.5-129		%Rec	1	6/6/2017 10:13:50 AM
Surr: Toluene-d8	137	64.5-151		%Rec	1	6/6/2017 10:13:50 AM
Surr: 1-Bromo-4-fluorobenzene	103	63.1-141		%Rec	1	6/6/2017 10:13:50 AM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R36616 Analyst: BB
Percent Moisture	8.24	0.500		wt%	1	6/6/2017 10:49:18 AM

Fremont
Analytical

Work Order: 1706036 CLIENT: AECOM Project: 1001 Minor /	Ave						Diesel	QC S and Heavy	SUMMAF Oil by NW		-
Sample ID MB-17273	SampType: MBLK			Units: mg/Kg		Prep Date	e: 6/6/201	7	RunNo: 366	645	
Client ID: MBLKS	Batch ID: 17273					Analysis Date	e: 6/7/201	7	SeqNo: 703	8436	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	22.2		20.00		111	50	150				
Surr: o-Terphenyl	22.4		20.00		112	50	150				
Sample ID LCS-17273	SampType: LCS			Units: mg/Kg		Prep Date	e: 6/6/201	7	RunNo: 366	645	
Client ID: LCSS	Batch ID: 17273					Analysis Date	e: 6/7/201	7	SeqNo: 703	8437	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	556	20.0	500.0	0	111	65	135				
Surr: 2-Fluorobiphenyl	21.2		20.00		106	50	150				
Surr: o-Terphenyl	24.0		20.00		120	50	150				
Sample ID 1706026-018ADUP	SampType: DUP			Units: mg/Kg-	dry	Prep Date	e: 6/6/201	7	RunNo: 366	645	
Client ID: BATCH	Batch ID: 17273					Analysis Date	e: 6/7/201	7	SeqNo: 703	3439	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	29.2						0		30	
Diesel Range Organics (C12-C24)	235	29.2						209.3	11.6	30	
Heavy Oil	2,490	72.9						2,160	14.3	30	
Surr: 2-Fluorobiphenyl	27.8		29.15		95.5	50	150		0		
Surr: o-Terphenyl	31.0		29.15		106	50	150		0		
NOTES: DRO - Indicates the presence of	unresolved compounds el	uting from o	dodecane thro	ugh tetracosane (C1	2-C24).						
Sample ID 1706026-018AMS	SampType: MS			Units: mg/Kg-	dry	Prep Date	e: 6/6/201	7	RunNo: 366	645	
Client ID: BATCH	Batch ID: 17273					Analysis Date	e: 6/7/201	7	SeqNo: 703	3440	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	929	30.6	764.9	209.3	94.1	65	135				



CLIENT:	1706036 AECOM 1001 Minor	Ave							Diesel	QC S and Heavy	SUMMAI Oil by NW		-
Sample ID 170602	6-018AMS	SampType:	MS			Units: mg	J/Kg-dry	Prep Date	e: 6/6/201	17	RunNo: 36	645	
Client ID: BATCH	l	Batch ID:	17273					Analysis Date	e: 6/7/201	17	SeqNo: 70	3440	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2-Fluorobipl	henyl		31.4		30.60		103	50	150				
Surr: o-Terpheny	I		37.3		30.60		122	50	150				
Sample ID 170602	6-018AMSD	SampType:	MSD			Units: mg	J/Kg-dry	Prep Date	e: 6/6/201	17	RunNo: 36	645	
Client ID: BATCH	I	Batch ID:	17273					Analysis Date	e: 6/7/201	17	SeqNo: 70	3441	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			852	28.5	711.3	209.3	90.3	65	135	929.5	8.73	30	
Surr: 2-Fluorobipl	henyl		26.8		28.45		94.3	50	150		0		
Surr: o-Terpheny	I		31.2		28.45		110	50	150		0		
Sample ID 170603	7-008ADUP	SampType:	DUP			Units: mg	J/Kg-dry	Prep Date	e: 6/6/20 1	17	RunNo: 36	645	
Client ID: BATCH	l	Batch ID:	17273					Analysis Date	e: 6/7/201	17	SeqNo: 70	4513	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.8						0		30	
Heavy Oil			ND	52.1						0		30	
Surr: 2-Fluorobipl	henyl		20.7		20.84		99.5	50	150		0		
Surr: o-Terpheny	I		22.7		20.84		109	50	150		0		



CLIENT: A	706036 ECOM 001 Minor A	ve								QC S	SUMMAI Gasolin	RY REF e by NW ⁻	-
Sample ID LCS-1726	5	SampType:	LCS			Units: mg/Kg	9	Prep Da	te: 6/5/201	7	RunNo: 36	618	
Client ID: LCSS		Batch ID:	17265					Analysis Da	te: 6/5/201	7	SeqNo: 702	2888	
Analyte		R	lesult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			28.1	5.00	25.00	0	112	65	135				
Surr: Toluene-d8			1.23		1.250		98.8	65	135				
Surr: 4-Bromofluorol	benzene		1.28		1.250		102	65	135				
Sample ID MB-17265		SampType:	MBLK			Units: mg/Kg)	Prep Da	te: 6/5/201	7	RunNo: 36	618	
Client ID: MBLKS		Batch ID:	17265					Analysis Da	te: 6/5/201	7	SeqNo: 702	2889	
Analyte		R	lesult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	5.00									
Surr: Toluene-d8			1.25		1.250		100	65	135				
Surr: 4-Bromofluoro	benzene		1.21		1.250		97.2	65	135				
Sample ID 1706026-0	03BDUP	SampType:	DUP			Units: mg/Kg	g-dry	Prep Da	te: 6/5/201	7	RunNo: 36	618	
Client ID: BATCH		Batch ID:	17265					Analysis Da	te: 6/6/201	7	SeqNo: 702	2877	
Analyte		R	lesult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	5.80						0		30	
Surr: Toluene-d8			1.44		1.449		99.6	65	135		0		
Surr: 4-Bromofluoro	benzene		1.46		1.449		101	65	135		0		
Sample ID 1706036-0	02BMS	SampType:	MS			Units: mg/Kg	g-dry	Prep Da	te: 6/5/201	7	RunNo: 36	618	
Client ID: SP-2		Batch ID:	17265					Analysis Da	te: 6/6/201	7	SeqNo: 70	3123	
Analyte		R	lesult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			167	5.32	26.59	207.7	-153	65	135				SE
Surr: Toluene-d8			1.30		1.329		97.4	65	135				
Surr: 4-Bromofluorol NOTES:	benzene		1.52		1.329		114	65	135				
NUTES.													

S - Outlying spike recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).



Work Order:	1706036								00 9	SUMMA		
CLIENT:	AECOM											_
Project:	1001 Minor	Ave								Gasolin	e by NW	ГРН-Gx
Sample ID 17060	36-002BMSD	SampType: MSD			Units: mg/	Kg-dry	Prep Da	ite: 6/5/20 ⁻	17	RunNo: 36	618	
Client ID: SP-2		Batch ID: 17265					Analysis Da	ite: 6/6/20 ⁴	17	SeqNo: 70	3124	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		255	5.32	26.59	207.7	177	65	135	167.0	41.6	30	RSE
Surr: Toluene-d	8	1.28		1.329		95.9	65	135		0		
Surr: 4-Bromoflu	uorobenzene	1.53		1.329		115	65	135		0		

NOTES:

S - Outlying spike recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

R - High RPD due to high analyte concentration. In this range, high RPD's may be expected.



Work Order:	1706036								2.00	SUMMA		ORT
CLIENT:	AECOM								• - •			-
Project:	1001 Minor	Ave							Sample Mo	oisture (Pe	ercent Mo	oisture)
Sample ID 17060	50-001ADUP	SampType: DUP			Units: wt%		Prep Dat	e: 6/6/20	17	RunNo: 366	616	
Client ID: BATC	н	Batch ID: R36616				A	analysis Dat	e: 6/6/20	17	SeqNo: 702	2824	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		12.3	0.500						13.01	5.41	20	
Sample ID 17060	37-008ADUP	SampType: DUP			Units: wt%		Prep Dat	e: 6/6/20	17	RunNo: 366	616	
Client ID: BATC	н	Batch ID: R36616				A	analysis Dat	e: 6/6/20	17	SeqNo: 702	2848	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		8.50	0.500						8.691	2.18	20	



Work Order: 1706036

CLIENT: AECOM

Project: 1001 Minor Ave

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-17265	SampType: LCS			Units: mg/Kg		Prep Dat	te: 6/5/201	7	RunNo: 36	617	
Client ID: LCSS	Batch ID: 17265					Analysis Dat	te: 6/5/201	7	SeqNo: 702	2872	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.948	0.0200	1.000	0	94.8	64.3	133				
Toluene	0.796	0.0200	1.000	0	79.6	67.3	138				
Ethylbenzene	0.989	0.0300	1.000	0	98.9	74	129				
m,p-Xylene	2.00	0.0200	2.000	0	100	70	124				
o-Xylene	1.01	0.0200	1.000	0	101	68.1	139				
Surr: Dibromofluoromethane	1.21		1.250		96.9	56.5	129				
Surr: Toluene-d8	1.02		1.250		81.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.39		1.250		111	63.1	141				

Sample ID MB-17265	SampType: MBLK			Units: mg/Kg		Prep Date:	6/5/2017	RunNo: 36617	
Client ID: MBLKS	Batch ID: 17265					Analysis Date:	6/5/2017	SeqNo: 702873	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Benzene	ND	0.0200							
Toluene	ND	0.0200							
Ethylbenzene	ND	0.0300							
m,p-Xylene	ND	0.0200							
o-Xylene	ND	0.0200							
Surr: Dibromofluoromethane	1.09		1.250		87.0	56.5	129		
Surr: Toluene-d8	1.22		1.250		97.6	64.5	151		
Surr: 1-Bromo-4-fluorobenzene	1.14		1.250		91.5	63.1	141		
Sample ID 1706026-003BDUP	SampType: DUP			Units: mg/Kg-c	lry	Prep Date:	6/5/2017	RunNo: 36617	
Client ID: BATCH	Batch ID: 17265					Analysis Date:	6/6/2017	SeqNo: 702852	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual

			•		
Benzene	ND	0.0232		0	30
Toluene	ND	0.0232		0	30
Ethylbenzene	ND	0.0348		0	30
m,p-Xylene	ND	0.0232		0	30



Work Order: 1706036								QC S	SUMMAI	RY REF	PORT
CLIENT: AECOM						Volatile	Organi	c Compour	nds by EP	A Method	I 8260
Project: 1001 Min	or Ave										
Sample ID 1706026-003BDUP	SampType: DUP			Units: mg	/Kg-dry	Prep Dat	te: 6/5/201	7	RunNo: 36	617	
Client ID: BATCH	Batch ID: 17265					Analysis Dat	te: 6/6/201	7	SeqNo: 702	2852	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0232						0		30	
Surr: Dibromofluoromethane	1.31		1.449		90.2	56.5	129		0		
Surr: Toluene-d8	1.41		1.449		97.3	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzer	ne 1.37		1.449		94.5	63.1	141		0		
Sample ID 1706026-012BMS	SampType: MS			Units: mg	/Kg-dry	Prep Dat	te: 6/5/201	7	RunNo: 36	617	
Client ID: BATCH	Batch ID: 17265					Analysis Dat	te: 6/6/201	7	SeqNo: 702	2856	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.14	0.0242	1.209	0	94.2	63.5	133				
Toluene	1.04	0.0242	1.209	0	86.4	63.4	132				
Ethylbenzene	1.13	0.0363	1.209	0	93.3	54.5	134				
m,p-Xylene	2.25	0.0242	2.418	0	93.0	53.1	132				
o-Xylene	1.13	0.0242	1.209	0	93.3	53.3	139				
Surr: Dibromofluoromethane	1.39		1.511		92.0	56.5	129				
Surr: Toluene-d8	1.45		1.511		95.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzer	ne 1.57		1.511		104	63.1	141				
Sample ID 1706026-012BMSD	SampType: MSD			Units: mg	/Kg-dry	Prep Dat	te: 6/5/201	7	RunNo: 36	617	
Client ID: BATCH	Batch ID: 17265					Analysis Dat	te: 6/6/201	7	SeqNo: 702	2857	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.20	0.0242	1.209	0	99.6	63.5	133	1.139	5.54	30	
Toluene	1.18	0.0242	1.209	0	97.8	63.4	132	1.045	12.3	30	
Ethylbenzene	1.22	0.0363	1.209	0	101	54.5	134	1.127	8.05	30	
m,p-Xylene	2.44	0.0242	2.418	0	101	53.1	132	2.249	8.14	30	
o-Xylene	1.20	0.0242	1.209	0	99.4	53.3	139	1.128	6.35	30	
Surr: Dibromofluoromethane	1.46		1.511		96.7	56.5	129		0		
Surr: Toluene-d8	1.52		1.511		101	64.5	151		0		

1.511

Surr: 1-Bromo-4-fluorobenzene

1.55

0

141

103

63.1



Work Order: 1	1706036								2.00	SUMMA	RY RFF	PORT	
CLIENT:	AECOM												
Project: 1	1001 Minor	Ave					Volatile Organic Compounds by EPA Method 8260						
Sample ID 1706026-	-012BMSD	SampType: MSD			Units: mg/Kg-dry		Prep Date: 6/5/2017			RunNo: 36617			
Client ID: BATCH		Batch ID: 17265					Analysis Dat	e: 6/6/20 *	17	SeqNo: 70	2857		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Sample ID 1706027-	-002BDUP	SampType: DUP			Units: mg	/Kg-dry	Prep Dat	e: 6/5/20 ⁴	17	RunNo: 36	617		
Client ID: BATCH		Batch ID: 17265					Analysis Dat	e: 6/6/20 ⁴	17	SeqNo: 70	3117		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene		ND	0.0224						0		30		
Toluene		ND	0.0224						0		30		
Ethylbenzene		ND	0.0336						0		30		
m,p-Xylene		0.0477	0.0224						0.04443	7.01	30		
o-Xylene		0.0267	0.0224						0.02264	16.6	30		
Surr: Dibromofluor	omethane	1.25		1.402		89.4	56.5	129		0			
Surr: Toluene-d8		1.49		1.402		106	64.5	151		0			
Surr: 1-Bromo-4-flu	uorobenzene	1.46		1.402		104	63.1	141		0			



Sample Log-In Check List

CI	ient Name:	URS	Work Order Numb	per: 1706036	
Lo	ogged by:	Clare Griggs	Date Received:	6/5/2017 1	12:39:00 PM
<u>Cha</u>	in of Cust	ody			
1.	Is Chain of C	ustody complete?	Yes 🗹	No 🗌	Not Present
2.	How was the	sample delivered?	Courier		
Log	In				
-	Coolers are p	present?	Yes 🖌	No 🗌	
			_	_	
4.	Shipping con	tainer/cooler in good condition?	Yes 🖌	No 🗌	
5.		Is present on shipping container/cooler? nments for Custody Seals not intact)	Yes 🖌	No 🗌	Not Required
6.	Was an atter	npt made to cool the samples?	Yes 🖌	No 🗌	
7.	Were all item	is received at a temperature of $>0^{\circ}$ C to 10.0° C *	Yes 🖌	No 🗌	
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌	
9.	Sufficient sar	mple volume for indicated test(s)?	Yes 🖌	No 🗌	
10.	Are samples	properly preserved?	Yes 🖌	No 🗌	
11.	Was preserv	ative added to bottles?	Yes	No 🖌	NA 🗌
12.	Is there head	Ispace in the VOA vials?	Yes	No 🗌	NA 🗹
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🖌	No 🗌	
14.	Does paperw	ork match bottle labels?	Yes 🖌	No 🗌	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌	
16.	Is it clear what	at analyses were requested?	Yes 🖌	No 🗌	
17.	Were all hold	ling times able to be met?	Yes 🖌	No 🗌	
<u>Spe</u>	cial Handl	ing (if applicable)			
18.	Was client no	otified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
	Person	Notified: Date			
	By Who	om: Via:	eMail Ph	one 🗌 Fax 🏾 [In Person
	Regardi	ing:			
	Client Ir	nstructions:			
19.	Additional rei	marks:			

Item Information

Item #	Temp ºC
Cooler	8.2
Sample	4.1

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Same Day (specify)	x Received	ne	Date/Time		Relinquished ×
1239 O Next Day	1/201	7	Date/Tim	eta	Relinquished
	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.	his Agreement wit this Agreement.	I represent that I am authorized to enter into this Agreement v each of the terms on the front and backside of this Agreement.	at I am authori rms on the front	I represent th each of the te
3 Dav	de O-Phosphate Fluoride Nitrate+Nitrite	Sulfate Bromide	Nitrite Chloride	: Nitrate N	***Anions (Circle):
e Sr Sn Ti Ti U V Zn	Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se	TAL	-8 Priority Pollutants	MTCA-5 RCRA-8	*Metals (Circle): MTCA-5
IE	sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water,	roduct, S = Soil, SD =	Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid,	NQ = Aqueous, B = E	Matrix: A = Air,
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DOG THE DESIGN REAL TO THE	60536	-		mes -	client: Af
Special Remarks: DAV TAT 16	Name: 1001 MINOR AVE.	Fax: 206-352-7178	- Trayukanh F	Ana	
ct No (internal): 1700 030	Date: Page: of: Lob	Tel: 206-352-3790		Lenion	
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3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Ave Work Order Number: 1706112

June 16, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 3 sample(s) on 6/9/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohl C. Redy

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor Ave 1706112	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1706112-001	SP-06082017-1	06/08/2017 11:22 AM	06/09/2017 11:54 AM
1706112-002	SP-06082017-2	06/08/2017 11:36 AM	06/09/2017 11:54 AM
1706112-003	SP-06082017-3	06/08/2017 11:55 AM	06/09/2017 11:54 AM



Case Narrative

WO#: **1706112** Date: **6/16/2017**

CLIENT:AECOMProject:1001 Minor Ave

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1706112** Date Reported: **6/16/2017**

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



 Work Order:
 1706112

 Date Reported:
 6/16/2017

Client: AECOM		Collection Date: 6/8/2017 11:36:00 AM								
Project: 1001 Minor Ave										
Lab ID: 1706112-002				Matrix: So	oil					
Client Sample ID: SP-06082017-2										
Analyses	Result	RL	Qual	Units	DF	Date Analyzed				
Diesel and Heavy Oil by NWTPH-Dx	/Dx Ext.			Batch	n ID:	17323 Analyst: SG				
Diesel (Fuel Oil)	77.5	20.7		mg/Kg-dry	1	6/10/2017 8:44:39 PM				
Heavy Oil	ND	51.8		mg/Kg-dry	1	6/10/2017 8:44:39 PM				
Surr: 2-Fluorobiphenyl	109	50-150		%Rec	1	6/10/2017 8:44:39 PM				
Surr: o-Terphenyl	114	50-150		%Rec	1	6/10/2017 8:44:39 PM				
Gasoline by NWTPH-Gx				Batch	n ID:	17345 Analyst: NG				
Gasoline	ND	2.84		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
Surr: 4-Bromofluorobenzene	101	65-135		%Rec	1	6/13/2017 9:03:01 AM				
Surr: Toluene-d8	98.8	65-135		%Rec	1	6/13/2017 9:03:01 AM				
Volatile Organic Compounds by EP	A Method	<u>8260C</u>		Batch	n ID:	17345 Analyst: NG				
Benzene	ND	0.0114		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
Toluene	ND	0.0114		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
Ethylbenzene	ND	0.0170		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
m,p-Xylene	ND	0.0114		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
o-Xylene	ND	0.0114		mg/Kg-dry	1	6/13/2017 9:03:01 AM				
Surr: Dibromofluoromethane	87.4	56.5-129		%Rec	1	6/13/2017 9:03:01 AM				
Surr: Toluene-d8	90.2	64.5-151		%Rec	1	6/13/2017 9:03:01 AM				
Surr: 1-Bromo-4-fluorobenzene	98.1	63.1-141		%Rec	1	6/13/2017 9:03:01 AM				
Sample Moisture (Percent Moisture)			Batch	n ID:	R36729 Analyst: CG				
Percent Moisture	10.4	0.500		wt%	1	6/12/2017 8:20:12 AM				



Work Order: 1706112 Date Reported: 6/16/2017

Client: AECOM	Collection Date: 6/8/2017 11:55:00 AM									
Project: 1001 Minor Ave										
Lab ID: 1706112-003				Matrix: Sc	oil					
Client Sample ID: SP-06082017-3										
Analyses	Result	RL	Qual	Units	DF	Dat	e Analyzed			
Diesel and Heavy Oil by NWTPH-Dx	/Dx Ext.			Batch	n ID:	17323	Analyst: SG			
Diesel (Fuel Oil)	ND	20.6		mg/Kg-dry	1	6/10/2	2017 10:42:17 PM			
Heavy Oil	ND	51.5		mg/Kg-dry	1	6/10/2	2017 10:42:17 PM			
Surr: 2-Fluorobiphenyl	107	50-150		%Rec	1	6/10/2	2017 10:42:17 PM			
Surr: o-Terphenyl	113	50-150		%Rec	1	6/10/2	2017 10:42:17 PM			
Gasoline by NWTPH-Gx				Batch	n ID:	17345	Analyst: NG			
Gasoline	ND	2.39		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
Surr: 4-Bromofluorobenzene	98.4	65-135		%Rec	1	6/13/2	2017 11:26:00 AM			
Surr: Toluene-d8	99.1	65-135		%Rec	1	6/13/2	2017 11:26:00 AM			
Volatile Organic Compounds by EP	A Method	<u>8260C</u>		Batch	n ID:	17345	Analyst: NG			
Benzene	ND	0.00956		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
Toluene	0.0223	0.00956		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
Ethylbenzene	ND	0.0143		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
m,p-Xylene	ND	0.00956		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
o-Xylene	ND	0.00956		mg/Kg-dry	1	6/13/2	2017 11:26:00 AM			
Surr: Dibromofluoromethane	90.4	56.5-129		%Rec	1	6/13/2	2017 11:26:00 AM			
Surr: Toluene-d8	93.3	64.5-151		%Rec	1	6/13/2	2017 11:26:00 AM			
Surr: 1-Bromo-4-fluorobenzene	95.2	63.1-141		%Rec	1	6/13/2	2017 11:26:00 AM			
Sample Moisture (Percent Moisture)			Batch	n ID:	R36796	Analyst: BB			
Percent Moisture	7.28	0.500		wt%	1	6/14/2	2017 8:32:25 AM			



	1706112 AECOM									QC S	SUMMA	RY REF	PORT
-	1001 Minor /	Ave							Diesel	and Heavy	Oil by NW	/TPH-Dx/	/Dx Ex
Sample ID: MB-1732	23	SampType	BLK			Units: mg/K	g	Prep Dat	e: 6/9/201	7	RunNo: 367	'33	
Client ID: MBLKS		Batch ID:	17323					Analysis Dat	e: 6/10/20	17	SeqNo: 704	974	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.0									
Heavy Oil			ND	50.0									
Surr: 2-Fluorobiph	enyl		23.1		20.00		116	50	150				
Surr: o-Terphenyl			23.4		20.00		117	50	150				
Sample ID: LCS-173	323	SampType	: LCS			Units: mg/K	g	Prep Dat	e: 6/9/201	7	RunNo: 367	/33	
Client ID: LCSS		Batch ID:	17323					Analysis Dat	e: 6/10/20	17	SeqNo: 704	975	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			533	20.0	500.0	0	107	65	135				
Surr: 2-Fluorobiph	enyl		22.6		20.00		113	50	150				
Surr: o-Terphenyl			24.5		20.00		122	50	150				
Sample ID: 1706112	-002ADUP	SampType	DUP			Units: mg/K	g-dry	Prep Dat	e: 6/9/201	7	RunNo: 367	/33	
Client ID: SP-0608	2017-2	Batch ID:	17323					Analysis Dat	e: 6/10/20	17	SeqNo: 704	977	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			124	19.3						77.46	46.5	30	R
Heavy Oil			ND	48.3						0		30	
Surr: 2-Fluorobiph	enyl		21.5		19.30		111	50	150		0		
Surr: o-Terphenyl			22.0		19.30		114	50	150		0		
NOTES: R - High RPD obs	erved. The met	hod is in contr	rol as indica	ted by the L	.CS.								
Sample ID: 1706112	-002AMS	SampType	MS			Units: mg/K	g-dry	Prep Dat	e: 6/9/201	7	RunNo: 367	/33	
Client ID: SP-0608	2017-2	Batch ID:	17323			_		Analysis Dat	e: 6/10/20	17	SeqNo: 704	978	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			788	21.2	531.2	77.46	134	65	135				
Surr: 2-Fluorobiph	ond		23.5		21.25		111	50	150				



	1706112 AECOM							Diacol	QC S and Heavy			-
Project: 1	001 Minor	Ave						Diesei	anu neavy			
Sample ID: 1706112-	-002AMS	SampType: MS	Units: mg/Kg-dry		Prep Date: 6/9/2017			RunNo: 36733				
Client ID: SP-06082017-2		Batch ID: 17323					Analysis Dat	e: 6/10/20)17	SeqNo: 704	978	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl		25.8		21.25		121	50	150				
Sample ID: 1706112-	002AMSD	SampType: MSD			Units: mg	/Kg-dry	Prep Date	e: 6/9/201	7	RunNo: 367	/33	
Client ID: SP-06082	2017-2	Batch ID: 17323					Analysis Date	e: 6/10/20	17	SeqNo: 704	979	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		768	20.5	513.1	77.46	135	65	135	788.0	2.62	30	
Surr: 2-Fluorobiphe	enyl	22.9		20.52		111	50	150		0		
Surr: o-Terphenyl		25.3		20.52		123	50	150		0		



CLIENT: AECOM Project: 1001 Minor Ave Gasoline by Sample ID: MB-17345 SampType: MBLK Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Client ID: MBLKS Batch ID: 17345 Manlysis Date: 6/12/2017 SeqNo: 705994 Analyte Result RL SPK Ref Val %REC LowLimit HighLimit RPD RP Gasoline ND 5.00	Work Order											2 20	SUMMA		PORT
Project. 100 Holino Ave Sample ID: MB-17345 SampType: MBLK Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Sample ID: MBLKS Batch ID: 17345 Samptrype: Result RL SPK Ref Val %REC LowLimit HighLimit RPD RP dVal %RPD RP Gasoline ND 5.00 Surr: 7-bitne-d8 1.25 1.250 94.6 65 135 Sample ID: LCS-17345 SampType: LCS Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Sample ID: LCS1 SampType: LCS Units: mg/Kg Prep Date: 6/13/2017 SeqNo: 705994 Sample ID: LCS1 Batch ID: 17345 Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Sample ID: LCS1 Batch ID: 17345 Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Surr: Toluene-d8 1.27 1.250 0.10 65 135 Surr: Toluene-d8 127 1.250 101 65 135 Surr: Toluene-d8 0.706<	CLIENT:	AEC	MO												-
Client ID: MBLKS Batch ID: 17345 Each ID: 17345 Each ID: Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPD Gasoline ND 5.00 1.250 100 65 135 5.00 1.250 100 65 135 5.00 1.050 1.050 100 65 135 5.00 1.050 1.050 94.6 65 135 5.00 7.05994 Analysis Date: 6/13/2017 RunNo: 86783 Sample ID: LCSS Batch ID: 17345 Server Alabasis Date: 6/13/2017 SeqNo: 705994 Analysis Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 2.51 5.00 2.50 0 100 65 135 Server Server Server Result RL SPK value SPK Ref Val %REC <	Project:	1001	Minor A	Ave									Gasolin		IPH-G
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND 5.00 1.250 100 65 135 1	Sample ID: ME	3-17345		SampType	e: MBLK			Units: mg/Kg		Prep Da	te: 6/12/20)17	RunNo: 367	783	
Gasoline ND 5.00 Surr: Toluene-d8 1.25 1.250 100 65 135 Surr: 4-Bromofluorobenzene 1.18 1.250 94.6 65 135 Sample ID: LCS-17345 SampType: LCS Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Client ID: LCS3 Batch ID: 17345 Analysis Date: 6/13/2017 SeqNo: 705993 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 Surr: 76 luene-d8 1.27 1.250 101 65 135 Surr: 4-Bromofluorobenzene 1.22 1.250 97.8 65 135 Sample ID: 1706112-002BDUP SampType: DUP Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Sample ID: 1706112-002BDUP SampType: ND 2.84 0 0 0 0 0	Client ID: ME	BLKS		Batch ID:	17345					Analysis Da	te: 6/12/20)17	SeqNo: 70	5994	
Surr. Toluene-d8 1.25 1.250 100 65 135 Surr. 4-Bromofluorobenzene 1.18 1.250 94.6 65 135 Surr. 4-Bromofluorobenzene SampType: LCS Units: mg/Kg Prep Date: 61/22017 RunNo: 367837 Client ID: LCSS Batch ID: 17345 Smpt Ype: LCS Lunits: mg/Kg Verp Date: 61/22017 SeqNo: 705993 Analyte Result RL SPK Nalue SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 Verp Pate: 61/22017 RunNo: 36783 Surr: Toluene-d8 1.27 1.250 0 101 65 135 Verp Pate: 61/32017 SeqNo: 705998 Client ID: SP-06082017-2 Batch ID: 17345 Verp Pate: 61/32017 SeqNo: 705998 Analyte Result RL SPK Nalue SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND <th>Analyte</th> <th></th> <th></th> <th></th> <th>Result</th> <th>RL</th> <th>SPK value</th> <th>SPK Ref Val</th> <th>%REC</th> <th>LowLimit</th> <th>HighLimit</th> <th>RPD Ref Val</th> <th>%RPD</th> <th>RPDLimit</th> <th>Qual</th>	Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr. 4-Bromofluorobenzene 1.18 1.250 94.6 65 135 Sample ID: LCS-17345 SampType: LCS Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Client ID: LCSS Batch ID: 17345 SR Prep Date: 6/13/2017 SeqNo: 705993 Analyte Result RL SPK ref Val %REC LowLimit HighLimit RPD RPd %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 Surr. 70100000000000000000000000000000000000	Gasoline				ND	5.00									
Sample ID: LCS-17345 SampType: LCS Units: mg/Kg Prep Date: 6/12/2017 RunNo: 36783 Client ID: LCSS Batch ID: 17345 Analyte Analyte: 6/13/2017 SeqNo: 705993 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD RPd Val %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 Surr: Toluene-d8 1.27 1.250 101 65 135 Surr: 4-Bromofluorobenzene 1.22 1.250 97.8 65 135 Surr: 4-Bromofluorobenzene RPD R/PD RPD R/PD RPD R/PD RUNNo: 36783 Sample ID: 1706112-002BDUP SampType: DUP Units: mg/Kg-dry Prep Date: 6/13/2017 RunNo: 36783 Client ID: SP-06082017-2 Batch ID: 17345 Analyte 6/13/2017 SeqNo: 705988 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD R/Pal	Surr: Toluen	ie-d8			1.25		1.250		100	65	135				
Client ID: LCSS Batch ID: 17345 Analysis Date: 6/13/2017 SeqNo: 705993 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 %RPD RP Surr: Tollene-d8 1.27 1.250 011 65 135 %RPD RP Surr: Tollene-d8 1.22 1.250 97.8 65 135	Surr: 4-Brom	nofluorober	izene		1.18		1.250		94.6	65	135				
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 25.1 5.00 25.00 0 100 65 135 Surr: Toluene-d8 1.27 1.250 101 65 135 5 5 5 Sample ID: 1706112-002BDUP SampType: DUP Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 3678 369 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 869 705 916 135 0 705 0 705 0 705 916 135 0 705 0 707 702 65	Sample ID: LC	S-17345		SampType	e: LCS			Units: mg/Kg		Prep Da	te: 6/12/20)17	RunNo: 367	783	
Gasoline 25.1 5.00 25.00 0 100 65 135 Surr: Toluene-d8 1.27 1.250 101 65 135 Surr: 4-Bromofluorobenzene 1.22 1.250 97.8 65 135 Sample ID: 1706112-002BDUP SampType: DUP Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: SP-60682017-2 Batch ID: 17345 Vinits: mg/Kg-dry Prep Date: 6/13/2017 SeqNo: 705988 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND 2.84 0 0.7102 99.5 65 135 0 Surr: Toluene-d8 0.706 0.7102 0.7102 102 65 135 0 Sample ID: 1706132-016BMS SampType: MS Units: mg/Kg-dry Prep Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val	Client ID: LC	ss		Batch ID:	17345					Analysis Da	te: 6/13/20	17	SeqNo: 70	5993	
Surr: Toluene-d8 1.27 1.25 101 65 135 N Surr: 4-Bromofluorobenzene 1.22 1.25 97.8 65 135 N	Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene 1.22 1.250 97.8 65 135 Handwise Han	Gasoline				25.1	5.00	25.00	0	100	65	135				
Sample ID: 1706112-0028DUP SampType: DUP Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: SP-06082017-2 Batch ID: 17345 RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND 2.84 0.7102 99.5 65 135 0	Surr: Toluen	ie-d8			1.27		1.250		101	65	135				
Client ID: SP-06082017-2 Batch ID: 17345 Analysis Date: 6/13/2017 SeqNo: 705 984 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND 2.84 0.7102 99.5 65 135 0	Surr: 4-Brom	nofluorober	izene		1.22		1.250		97.8	65	135				
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline ND 2.84 0.7102 99.5 65 135 0 0 Surr: Toluene-d8 0.706 0.7102 0.7102 99.5 65 135 0 0 Surr: 4-Bromofluorobenzene 0.723 0.7102 Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: Batch ID: 17345 Vinits: mg/Kg-dry Prep Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 27.9 5.78 28.91 0 96.6 65 135 VINC 36783 Surr: Toluene-d8 1.44 1.446 99.6 65 135 VINC 36783	Sample ID: 170	06112-002	BDUP	SampType	e: DUP			Units: mg/Kg-	dry	Prep Da	te: 6/12/20)17	RunNo: 367	783	
Gasoline ND 2.84 0 0.7102 99.5 65 135 0 Surr: Toluene-d8 0.706 0.7102 0.7102 102 65 135 0 Surr: 4-Bromofluorobenzene 0.723 0.7102 0.7102 102 65 135 0 Sample ID: 1706132-016BMS SampType: MS Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: Batch ID: 17345 Units: mg/Kg-dry Prep Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 27.9 5.78 28.91 0 96.6 65 135 Image: Second Se	Client ID: SP	-06082017	-2	Batch ID:	17345					Analysis Da	te: 6/13/20)17	SeqNo: 70	5988	
Surr: Toluene-d8 0.706 0.7102 99.5 65 135 0 Surr: 4-Bromofluorobenzene 0.723 0.7102 102 65 135 0 Sample ID: 1706132-016BMS SampType: MS Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: BATCH Batch ID: 17345 Frequence 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD %RPD Gasoline 27.9 5.78 28.91 0 96.6 65 135 Ker Val 5 135 Ker Val Ker Val 99.6 65 135 Ker Val Ker Val 144 144 144 14	Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene 0.723 0.7102 102 65 135 0 Sample ID: 1706132-016BMS SampType: MS Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: BATCH Batch ID: 17345 Analyte Freq Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 27.9 5.78 28.91 0 96.6 65 135 500 140 144 1446 99.6 65 135 500	Gasoline				ND	2.84						0		30	
Sample ID: 1706132-016BMS SampType: MS Units: mg/Kg-dry Prep Date: 6/12/2017 RunNo: 36783 Client ID: BATCH Batch ID: 17345 Analysis Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 27.9 5.78 28.91 0 96.6 65 135 4000000000000000000000000000000000000	Surr: Toluen	ie-d8			0.706		0.7102		99.5	65	135		0		
Client ID: BATCH Batch ID: 17345 Analysis Date: 6/13/2017 SeqNo: 706325 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RP Gasoline 27.9 5.78 28.91 0 96.6 65 135 4 4 1.44 5 99.6 65 135 5 135	Surr: 4-Brom	nofluorober	zene		0.723		0.7102		102	65	135		0		
AnalyteResultRLSPK valueSPK Ref Val%RECLowLimitHighLimitRPD Ref Val%RPDRPGasoline27.95.7828.91096.665135Surr: Toluene-d81.441.44699.665135	Sample ID: 170	06132-016	BMS	SampType	e: MS			Units: mg/Kg-	dry	Prep Da	te: 6/12/20)17	RunNo: 367	783	
Gasoline 27.9 5.78 28.91 0 96.6 65 135 Surr: Toluene-d8 1.44 1.446 99.6 65 135	Client ID: BA	тсн		Batch ID:	17345					Analysis Da	te: 6/13/20)17	SeqNo: 70	6325	
Surr: Toluene-d8 1.44 1.446 99.6 65 135	Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
	Gasoline				27.9	5.78	28.91	0	96.6	65	135				
Surr: 4-Bromofluorobenzene 1.46 1.446 101 65 135	Surr: Toluen	e-d8			1.44		1.446		99.6	65	135				
	Surr: 4-Brom	nofluorober	zene		1.46		1.446		101	65	135				



Work Order: CLIENT: Project:	1706112 AECOM 1001 Minor	Ave							QC S	SUMMA Gasolin	RY REF e by NW ⁻	_		
Sample ID: 17061	32-016BMSD	SampType: MSD Batch ID: 1734			Units: mg	/Kg-dry	Prep Da Analysis Da	te: 6/12/20		RunNo: 36783 SeqNo: 706326				
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit		RPD Ref Val	%RPD	RPDLimit	Qual		
Gasoline		27.1	5.78	28.91	0	93.8	65	135	27.93	2.96	30			
Surr: Toluene-da	8	1.43		1.446		98.8	65	135		0				
Surr: 4-Bromoflu	uorobenzene	1.45		1.446		101	65	135		0				



Work Order:	1706112								00	SUMMA		ORT
CLIENT:	AECOM											
Project:	1001 Minor	Ave							Sample M	oisture (Pe	ercent Mo	oisture)
Sample ID: 17061	50-013ADUP	SampType: DUP			Units: wt%		Prep Da	te: 6/14/20	017	RunNo: 367	'96	
Client ID: BATC	н	Batch ID: R36796					Analysis Da	te: 6/14/20	017	SeqNo: 706	6499	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		8.35	0.500						9.225	9.97	20	
Sample ID: 17061	20-006ADUP	SampType: DUP			Units: wt%		Prep Da	te: 6/14/20	017	RunNo: 367	'96	
Client ID: BATC	н	Batch ID: R36796					Analysis Da	te: 6/14/20	017	SeqNo: 706	508	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		14.6	0.500						14.19	2.74	20	



Work Order:	1706112							2.00	SUMMAF		ORT	
CLIENT:	AECOM		QC SUMMARY REPOR									
Project:	1001 Minor	Ave						Sample Mo	Disture (Pe	ercent Mo	oisture)	
Sample ID: 1706112-002ADUP		SampType: DUP			Units: wt%	Prep Date: 6/12/2017			RunNo: 36729			
Client ID: SP-06082017-2		Batch ID: R36729		Analysis Date: 6/12/2017					SeqNo: 704882			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC l	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Percent Moisture		9.96	0.500					10.44	4.63	20		
Sample ID: 1706124-001ADUP		SampType: DUP			Units: wt%		Prep Date: 6/12/20)17	RunNo: 36729			
Client ID: BATC	н	Batch ID: R36729				Analysis Date: 6/12/2017			SeqNo: 705030			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC l	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Percent Moisture		16.3	0.500					17.32	6.00	20		



Work Order: 1706112 CLIENT: AECOM Project: 1001 Minor A	Ave					Volatile	e Organi	QC : c Compou	
Sample ID: MB-17345	SampType: MBLK			Units: mg/Kg]	Prep Date: 6/12/2017			
Client ID: MBLKS	Batch ID: 17345					Analysis Da	17		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	
Benzene	ND	0.0200							
Toluene	ND	0.0200							
Ethylbenzene	ND	0.0300							
m,p-Xylene	ND	0.0200							
o-Xylene	ND	0.0200							
Surr: Dibromofluoromethane	1.25		1.250		99.9	56.5	129		
Surr: Toluene-d8	1.45		1.250		116	64.5	151		
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		95.8	63.1	141		
Sample ID: LCS-17345	SampType: LCS			Units: mg/Kg)	Prep Da	te: 6/12/20	17	
Client ID: LCSS	Batch ID: 17345					Analysis Date: 6/12/2017			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	
Benzene	1.00	0.0200	1.000	0	100	64.3	133		
Toluene	1.13	0.0200	1.000	0	113	67.3	138		
Ethylbenzene	1.00	0.0300	1.000	0	100	74	129		
m,p-Xylene	2.01	0.0200	2.000	0	101	70	124		
o-Xylene	1.01	0.0200	1.000	0	101	68.1	139		
Surr: Dibromofluoromethane	1.36		1.250		109	56.5	129		
Surr: Toluene-d8	1.52		1.250		122	64.5	151		
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		104	63.1	141		
Sample ID: 1706132-004BDUP	SampType: DUP			Units: mg/Kg-dry		Prep Da	17		
Client ID: BATCH	Batch ID: 17345					Analysis Da	te: 6/13/20	17	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	
Benzene	ND	0.0229						0	
Toluene	ND	0.0229						0	
Ethylbenzene	ND	0.0343						0	

ND

0.0229

QC SUMMARY REPORT

%RPD RPDLimit Qual

RunNo: 36782 SeqNo: 706013

RunNo: 36782 SeqNo: 706012

RunNo: 36782 SeqNo: 706002

0

%RPD RPDLimit

%RPD RPDLimit

mpounds by EPA Method 8260C

m,p-Xylene

Qual

30 30

30

30

Qual



CLIENT:	1706112 AECOM							Volatil	e Organi	QC S	SUMMA		
	1001 Minor /					Linito, ma	Warden :			•			. 0200
Sample ID: 1706132-004BDUP		SampType				Units: mg	g/rcg-ary		te: 6/12/20		RunNo: 367		
Client ID: BATCH		Batch ID:	17345					Analysis Da			SeqNo: 70	6002	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene			ND	0.0229						0		30	
Surr: Dibromofluo	promethane		1.47		1.430		103	56.5	129		0		
Surr: Toluene-d8			1.64		1.430		115	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene			1.35		1.430		94.8	63.1	141		0		
Sample ID: 1706132-010BMS		SampType	: MS			Units: mg	ts: mg/Kg-dry Prep Date: 6/12/2017		RunNo: 36782				
Client ID: BATCH		Batch ID:	17345					Analysis Da	ite: 6/13/20)17	SeqNo: 706006		
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			1.14	0.0242	1.211	0	94.1	63.5	133				
Toluene			1.31	0.0242	1.211	0	108	63.4	132				
Ethylbenzene			1.13	0.0363	1.211	0	93.6	54.5	134				
m,p-Xylene			2.27	0.0242	2.422	0	93.8	53.1	132				
o-Xylene			1.17	0.0242	1.211	0	96.8	53.3	139				
Surr: Dibromofluo	promethane		1.51		1.514		99.6	56.5	129				
Surr: Toluene-d8			1.80		1.514		119	64.5	151				
Surr: 1-Bromo-4-f	fluorobenzene		1.59		1.514		105	63.1	141				
Sample ID: 1706132	ample ID: 1706132-010BMSD SampType: MSD				Units: mg	g/Kg-dry	Prep Date: 6/12/2017		RunNo: 36782				
Client ID: BATCH		Batch ID:	17345					Analysis Date: 6/13/2017			SeqNo: 706007		
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			1.18	0.0242	1.211	0	97.8	63.5	133	1.140	3.89	30	
Toluene			1.34	0.0242	1.211	0	111	63.4	132	1.310	2.45	30	
Ethylbenzene			1.19	0.0363	1.211	0	98.1	54.5	134	1.134	4.63	30	
m,p-Xylene			2.37	0.0242	2.422	0	97.9	53.1	132	2.272	4.27	30	
o-Xylene			1.20	0.0242	1.211	0	99.1	53.3	139	1.172	2.37	30	
Surr: Dibromofluo	promethane		1.49		1.514		98.7	56.5	129		0		
Surr: Toluene-d8			1.80		1.514		119	64.5	151		0		

104

63.1

141

1.514

Surr: 1-Bromo-4-fluorobenzene

1.58

0



Work Order:	1706112						20	SUMMARY REPORT
CLIENT:	AECOM						• -	
Project:	1001 Minor	Ave					Volatile Organic Compo	unds by EPA Method 8260C
Sample ID: 170613	32-010BMSD	SampType: MSD			Units: mg/k	Kg-dry	Prep Date: 6/12/2017	RunNo: 36782
Client ID: BATCH	4	Batch ID: 17345					Analysis Date: 6/13/2017	SeqNo: 706007
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Va	I %RPD RPDLimit Qual
NOTES:								

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

R - High RPD observed, spike recoveries are within range.

Sample ID: 1706112-002BDUP	SampType: DUP			Units: mg/K	g-dry	Prep Dat	te: 6/12/20	17	RunNo: 367	/82	
Client ID: SP-06082017-2	Batch ID: 17345					Analysis Da	te: 6/13/20	17	SeqNo: 705	5998	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0114						0		30	
Toluene	ND	0.0114						0		30	
Ethylbenzene	ND	0.0170						0		30	
m,p-Xylene	ND	0.0114						0		30	
o-Xylene	ND	0.0114						0		30	
Surr: Dibromofluoromethane	0.617		0.7102		86.9	56.5	129		0		
Surr: Toluene-d8	0.658		0.7102		92.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	0.699		0.7102		98.5	63.1	141		0		



Sample Log-In Check List

Client Name: URS	Work Order Numb	per: 1706112	
Logged by: Erica Silva	Date Received:	6/9/2017 11:	54:00 AM
Chain of Custody			
1. Is Chain of Custody complete?	Yes 🖌	No 🗌	Not Present
2. How was the sample delivered?	Courier		
<u>Log In</u>			
3. Coolers are present?	Yes 🖌	No 🗌	
4. Shipping container/cooler in good condition?	Yes 🖌	No 🗌	
 Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact) 	Yes 🖌	No 🗌 N	Not Required 🗌
6. Was an attempt made to cool the samples?	Yes 🖌	No 🗌	
7. Were all items received at a temperature of $>0^{\circ}C$ to $10.0^{\circ}C^{*}$	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 🗌	
<u>Special Handling (if applicable)</u>			
18. Was client notified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
Person Notified: Date	:		
By Whom: Via:	eMail Ph	one 🗌 Fax 🗌	In Person
Regarding:			
Client Instructions:			
19. Additional remarks:			

Item Information

Item #	Temp ⁰C
Cooler	0.8
Sample	1.3
Temp Blank	0.3

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

US Next Day	x QUADate/Time	1 1154 17 11:13	Date/Time		Selinquished
verified Client's agreement to 3 Day	ical	Agreement with Frei s Agreement.	o enter into this backside of this Date/Time/	t I am authorized t ps on the front and	each if the term
	Bromide O-Phosphate Fluoride Nitrate+Nitrite	Sulfate Bromide	Chloride	Nitrate Nitrite	***Anions (Circle):
GW = Ground Water, SW = Storm Water, WW = Waste Water Turn-ground Time-		3 = 50	Priority Pollutants		**Metals (Circle): MTCA-5
			B=Bulk, O=Other. P=Product		*Matrix: A = Air, AQ = Aqueous,
	× ×	lias soll	±1/8/9	5-21028	+1028099-45
HOLD	× ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1136 5021	t1/8/17	2-210280	£1028090-45 Z
Comments	X	1122 Soll	- 6/8/17	51-060800-15	1 58-06
	Soline Calles Constants	Sample Type Time (Matrix)*	Date		Sample Name
	A P P P P P P P P P P P P P P P P P P P	Sample			
	CAN INCO				
	PM Email: david, reubvegel & yecarricain	_			·
Sample Disposal: 🗌 Return to client 🔯 Disposal by Jab (1960-1961)	Report To (PM): David Raubvagel		2499	205-438-2	
	Location: 1001 MIMI Ave Seattle WA		700	204- 254 - 205	Telephone:
2 Shore the selection	by: 01	101	VA 98161	egt le	City, State, Zip
2 5		41600		IIII 3ª Ave	Address:
	Project No: LOS 362 SA			AFROM	Client:
Concid Demonstration (internal): 170 (p 117	Name: ICCI ML	Fax: 206-352-7178	140000 Magana	Jauli	
Laboratory Services Agreement		Seattle, WA 98103 Tel: 206-352-3790		- 51	
		3600 Fremont Ave N.	53+	Fromo	A A A

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3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Ave Work Order Number: 1706279

June 26, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 2 sample(s) on 6/23/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohl c. Kady

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	AECOM 1001 Minor Ave 1706279	Work Order \$	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1706279-001	Stockpile-062217-1	06/22/2017 2:50 PM	06/23/2017 10:38 AM
1706279-002	Stockpile-062217-2	06/22/2017 3:00 PM	06/23/2017 10:38 AM



Case Narrative

WO#: **1706279** Date: **6/26/2017**

CLIENT: AECOM Project: 1001 Minor Ave

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1706279** Date Reported: **6/26/2017**

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



Analytical Report

 Work Order:
 1706279

 Date Reported:
 6/26/2017

Client: AECOM				Collection	Dat	te: 6/22/2017 2:50:00 PM
Project: 1001 Minor Ave						
Lab ID: 1706279-001				Matrix: So	oil	
Client Sample ID: Stockpile-062217-1						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/	<u>Dx Ext.</u>			Batch	ID:	17452 Analyst: SG
Diesel (Fuel Oil)	ND	19.7		mg/Kg-dry	1	6/24/2017 6:08:30 AM
Heavy Oil	ND	49.3		mg/Kg-dry	1	6/24/2017 6:08:30 AM
Surr: 2-Fluorobiphenyl	105	50-150		%Rec	1	6/24/2017 6:08:30 AM
Surr: o-Terphenyl	94.9	50-150		%Rec	1	6/24/2017 6:08:30 AM
Gasoline by NWTPH-Gx				Batch	ID:	17454 Analyst: MW
Gasoline	ND	5.44		mg/Kg-dry	1	6/23/2017 7:36:48 PM
Surr: 4-Bromofluorobenzene	97.7	65-135		%Rec	1	6/23/2017 7:36:48 PM
Surr: Toluene-d8	99.0	65-135		%Rec	1	6/23/2017 7:36:48 PM
Volatile Organic Compounds by EP	A Method	8260C		Batch	ID:	17454 Analyst: MW
Benzene	ND	0.0217		mg/Kg-dry	1	6/23/2017 7:36:48 PM
Toluene	ND	0.0217		mg/Kg-dry	1	6/23/2017 7:36:48 PM
Ethylbenzene	ND	0.0326		mg/Kg-dry	1	6/23/2017 7:36:48 PM
m,p-Xylene	ND	0.0217		mg/Kg-dry	1	6/23/2017 7:36:48 PM
o-Xylene	ND	0.0217		mg/Kg-dry	1	6/23/2017 7:36:48 PM
Surr: Dibromofluoromethane	89.7	56.5-129		%Rec	1	6/23/2017 7:36:48 PM
Surr: Toluene-d8	108	64.5-151		%Rec	1	6/23/2017 7:36:48 PM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%Rec	1	6/23/2017 7:36:48 PM
Sample Moisture (Percent Moisture)				Batch	ID:	R37001 Analyst: BB
Percent Moisture	13.6	0.500		wt%	1	6/23/2017 10:46:06 AM



Analytical Report

 Work Order:
 1706279

 Date Reported:
 6/26/2017

Client: AECOM				Collection	Da	t e: 6/22/2017 3:00:00 PM
Project: 1001 Minor Ave						
Lab ID: 1706279-002				Matrix: So	oil	
Client Sample ID: Stockpile-062217-2	2					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/	<u>'Dx Ext.</u>			Batch	ID:	17452 Analyst: SG
Diesel (Fuel Oil)	ND	21.1		mg/Kg-dry	1	6/24/2017 6:37:53 AM
Heavy Oil	ND	52.8		mg/Kg-dry	1	6/24/2017 6:37:53 AM
Surr: 2-Fluorobiphenyl	116	50-150		%Rec	1	6/24/2017 6:37:53 AM
Surr: o-Terphenyl	105	50-150		%Rec	1	6/24/2017 6:37:53 AM
Gasoline by NWTPH-Gx				Batch	ID:	17454 Analyst: MW
Gasoline	ND	5.38		mg/Kg-dry	1	6/23/2017 8:06:24 PM
Surr: 4-Bromofluorobenzene	101	65-135		%Rec	1	6/23/2017 8:06:24 PM
Surr: Toluene-d8	98.1	65-135		%Rec	1	6/23/2017 8:06:24 PM
Volatile Organic Compounds by EP	A Method	<u>8260C</u>		Batch	ID:	17454 Analyst: MW
Benzene	ND	0.0215		mg/Kg-dry	1	6/23/2017 8:06:24 PM
Toluene	ND	0.0215		mg/Kg-dry	1	6/23/2017 8:06:24 PM
Ethylbenzene	ND	0.0323		mg/Kg-dry	1	6/23/2017 8:06:24 PM
m,p-Xylene	ND	0.0215		mg/Kg-dry	1	6/23/2017 8:06:24 PM
o-Xylene	ND	0.0215		mg/Kg-dry	1	6/23/2017 8:06:24 PM
Surr: Dibromofluoromethane	90.4	56.5-129		%Rec	1	6/23/2017 8:06:24 PM
Surr: Toluene-d8	107	64.5-151		%Rec	1	6/23/2017 8:06:24 PM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%Rec	1	6/23/2017 8:06:24 PM
Sample Moisture (Percent Moisture)	!			Batch	ID:	R37001 Analyst: BB
Percent Moisture	13.2	0.500		wt%	1	6/23/2017 10:46:06 AM



	1706279									QC	SUMMAI	RY REF	POR
	AECOM								امعما	and Heavy			
Project:	1001 Minor	Ave							Diesei	and neavy			
Sample ID MB-1745	52	SampType	MBLK			Units: mg/	Kg	Prep Da	te: 6/23/2	017	RunNo: 370	006	
Client ID: MBLKS		Batch ID:	17452					Analysis Da	te: 6/23/2	017	SeqNo: 71	0687	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.0									
Heavy Oil			ND	50.0									
Surr: 2-Fluorobiphe	enyl		21.0		20.00		105	50	150				
Surr: o-Terphenyl			19.4		20.00		97.2	50	150				
Sample ID LCS-174	52	SampType	LCS			Units: mg/	Kg	Prep Da	te: 6/23/2	017	RunNo: 37	006	
Client ID: LCSS		Batch ID:	17452					Analysis Da	te: 6/23/2	017	SeqNo: 71	0688	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			551	20.0	500.0	0	110	65	135				
Surr: 2-Fluorobiphe	enyl		21.4		20.00		107	50	150				
Surr: o-Terphenyl			21.9		20.00		109	50	150				
Sample ID 1706265	-003ADUP	SampType	DUP			Units: mg/	Kg-dry	Prep Da	te: 6/23/2	017	RunNo: 37	006	
Client ID: BATCH		Batch ID:	17452					Analysis Da	te: 6/23/2	017	SeqNo: 71	0965	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	21.7						0		30	
Heavy Oil			ND	54.3						0		30	
Surr: 2-Fluorobiphe	enyl		24.2		21.72		111	50	150		0		
Surr: o-Terphenyl			22.4		21.72		103	50	150		0		
Sample ID 1706265	-003AMS	SampType	MS			Units: mg/	Kg-dry	Prep Da	te: 6/23/2	017	RunNo: 370	006	
Client ID: BATCH		Batch ID:	17452					Analysis Da	te: 6/23/2	017	SeqNo: 71	0966	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			552	19.8	493.9	4.668	111	65	135				
Surr: 2-Fluorobiphe	enyl		18.4		19.76		93.1	50	150				
Surr: o-Terphenyl					19.76			50					



Work Order: 1706279 CLIENT: AECOM						I	Diesel	QC S and Heavy	Oil by NW		
Project: 1001 Min Sample ID 1706265-003AMS	SampType: MS			Units: mg/K	a-drv	Prep Date:		-	RunNo: 37		
Client ID: BATCH	Batch ID: 17452			5	5	Analysis Date:	6/23/20	17	SeqNo: 71	0966	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1706265-003AMSD	SampType: MSD			Units: mg/K	g-dry	Prep Date:	6/23/20	17	RunNo: 37	006	
Client ID: BATCH	Batch ID: 17452					Analysis Date:	6/23/20	17	SeqNo: 71	0967	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	499	20.9	522.1	4.668	94.7	65	135	551.9	10.0	30	
Surr: 2-Fluorobiphenyl	18.7		20.88		89.7	50	150		0		
Surr: o-Terphenyl	19.1		20.88		91.3	50	150		0		
Sample ID 1706285-001ADUP	SampType: DUP			Units: mg/K	g	Prep Date:	6/23/20	17	RunNo: 37	006	
Client ID: BATCH	Batch ID: 17452					Analysis Date:	6/24/20	17	SeqNo: 71	0983	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	19.4						0		30	
Heavy Oil	ND	48.4						0		30	
Surr: 2-Fluorobiphenyl	22.5		19.38		116	50	150		0		
Surr: o-Terphenyl	20.1		19.38		104	50	150		0		



	1706279 AECOM								QC S	SUMMAI	RY REF	PORT
-	1001 Minor	Ave								Gasolin	e by NW [.]	TPH-Gx
Sample ID 1706277	-001BDUP	SampType: DUI	P		Units: mg/Kg·	dry	Prep Date	e: 6/23/20)17	RunNo: 37	012	
Client ID: BATCH		Batch ID: 174	54				Analysis Date	e: 6/23/20	017	SeqNo: 71	0629	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	4.69						0		30	
Surr: Toluene-d8		1.16	i	1.171		98.8	65	135		0		
Surr: 4-Bromofluor	robenzene	1.18	1	1.171		101	65	135		0		
Sample ID LCS-174	154	SampType: LCS	3		Units: mg/Kg		Prep Date	e: 6/23/20)17	RunNo: 37)12	
Client ID: LCSS		Batch ID: 174	54				Analysis Date	e: 6/23/20)17	SeqNo: 71	0632	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		27.6	5.00	25.00	0	111	65	135				
Surr: Toluene-d8		1.24		1.250		99.2	65	135				
Surr: 4-Bromofluor	robenzene	1.23	6	1.250		98.3	65	135				
Sample ID LCSD-17	7454	SampType: LCS	SD		Units: mg/Kg		Prep Date	e: 6/23/20)17	RunNo: 37	012	
Client ID: LCSS02		Batch ID: 174	54				Analysis Date	e: 6/23/20)17	SeqNo: 71	0631	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		27.5	5.00	25.00	0	110	65	135	27.63	0.330	20	
Surr: Toluene-d8		1.23	ł	1.250		98.8	65	135		0		
Surr: 4-Bromofluor	robenzene	1.24		1.250		99.0	65	135		0		
Sample ID MB-1745	54	SampType: MB	LK		Units: mg/Kg		Prep Date	e: 6/23/20)17	RunNo: 37	012	
Client ID: MBLKS		Batch ID: 174	54				Analysis Date	e: 6/23/20)17	SeqNo: 71	0633	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	5.00									
Surr: Toluene-d8		1.27		1.250		101	65	135				
Surr: 4-Bromofluor	robenzene	1.24		1.250		99.6	65	135				



Work Order:	1706279								2.00	SUMMA		PORT
CLIENT:	AECOM											
Project:	1001 Minor A	ve							Sample Mo	Disture (Pe	ercent Mo	oisture)
Sample ID 17062	52-005ADUP	SampType: DUP			Units: wt%		Prep Da	te: 6/23/20	017	RunNo: 370	001	
Client ID: BATC	н	Batch ID: R37001					Analysis Da	te: 6/23/20	017	SeqNo: 710	0433	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		29.5	0.500						29.26	0.930	20	



Work Order: 1706279 CLIENT: AECOM								QC S	SUMMA	RY REP	POR
Project: 1001 Minor /	Avo					Volatile	Organio	c Compoun	ds by EPA	A Method	8260
						Drop Doto		47	RunNo: 370		
Sample ID 1706277-001BDUP	SampType: DUP			Units: mg/Kg-	ary	Prep Date					
Client ID: BATCH	Batch ID: 17454					Analysis Date	: 6/23/20	17	SeqNo: 710	0622	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0187						0		30	
Toluene	ND	0.0187						0		30	
Ethylbenzene	ND	0.0281						0		30	
m,p-Xylene	ND	0.0187						0		30	
o-Xylene	ND	0.0187						0		30	
Surr: Dibromofluoromethane	1.05		1.171		89.3	56.5	129		0		
Surr: Toluene-d8	1.23		1.171		105	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.17		1.171		100	63.1	141		0		
Sample ID LCS-17454	SampType: LCS			Units: mg/Kg		Prep Date	6/23/20	17	RunNo: 370	011	
Client ID: LCSS	Batch ID: 17454					Analysis Date	6/23/20	17	SeqNo: 710	0625	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.04	0.0200	1.000	0	104	64.3	133				
Toluene	1.11	0.0200	1.000	0	111	67.3	138				
Ethylbenzene	1.10	0.0300	1.000	0	110	74	129				
m,p-Xylene	2.29	0.0200	2.000	0	115	70	124				
o-Xylene	1.10	0.0200	1.000	0	110	68.1	139				
Surr: Dibromofluoromethane	1.21		1.250		96.5	56.5	129				
Surr: Toluene-d8	1.33		1.250		107	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.25		1.250		99.7	63.1	141				
Sample ID LCSD-17454	SampType: LCSD			Units: mg/Kg		Prep Date	: 6/23/20	17	RunNo: 370	011	
Client ID: LCSS02	Batch ID: 17454			2.0		Analysis Date			SeqNo: 710	0624	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
	1.02	0.0200	1.000	0	102	74.6	124	1.038	2.04	20	
Benzene	1.02										
Benzene Toluene	1.02	0.0200	1.000	0	107	67.3	138	1.107	3.80	20	
		0.0200 0.0300	1.000 1.000	0 0	107 109	67.3 74	138 129	1.107 1.100	3.80 0.826	20 20	



Work Order: 1706279 CLIENT: AECOM Project: 1001 Mir	or Ave					Volatile	Organi	QC S c Compour	SUMMAI		-
Sample ID LCSD-17454	SampType: LCSD			Units: mg/Kg		Prep Date	6/23/20)17	RunNo: 37	D11	
Client ID: LCSS02	Batch ID: 17454					Analysis Date	6/23/20	017	SeqNo: 71	0624	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	1.10	0.0200	1.000	0	110	68.1	139	1.097	0.663	20	
Surr: Dibromofluoromethane	1.16		1.250		92.9	56.5	129		0		
Surr: Toluene-d8	1.30		1.250		104	64.5	151		0		
Surr: 1-Bromo-4-fluorobenze	ne 1.28		1.250		103	63.1	141		0		
Sample ID MB-17454	SampType: MBLK			Units: mg/Kg		Prep Date	6/23/20)17	RunNo: 37	011	
Client ID: MBLKS	Batch ID: 17454					Analysis Date	6/23/20	017	SeqNo: 71	0626	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.08		1.250		86.4	56.5	129				
Surr: Toluene-d8	1.28		1.250		102	64.5	151				
Surr: 1-Bromo-4-fluorobenze	ne 1.24		1.250		99.0	63.1	141				



Sample Log-In Check List

CI	ient Name:	URS	Work Order Nu	mber: 1706279		
Lo	ogged by:	Clare Griggs	Date Received	: 6/23/2017	′ 10:38:00 AM	
<u>Cha</u>	in of Custo	ody				
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present	
2.	How was the	sample delivered?	<u>Courier</u>			
<u>Log</u>	In					
-	Coolers are p	present?	Yes 🖌	No 🗌		
				_		
4.	Shipping cont	tainer/cooler in good condition?	Yes 🖌	No		
5.		s present on shipping container/cooler? ments for Custody Seals not intact)	Yes 🗹	No 🗌	Not Required	
6.	Was an atten	npt made to cool the samples?	Yes 🖌	No 🗌	NA 🗌	
7.	Were all item	s 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 san	nple volume for indicated test(s)?	Yes 🖌	No 🗌		
10.	Are samples	properly preserved?	Yes 🖌	No 🗌		
11.	Was preserva	ative added to bottles?	Yes 🖌	No 🗌	NA 🗌	
					MeOH	
		space in the VOA vials?	Yes 🗋	No 🗌	NA 🔽	
-		es containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌		
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗀		
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌		
		at analyses were requested?	Yes 🖌	No 🗌		
17.	Were all hold	ing times able to be met?	Yes 🖌	No 🗌		
Spe	cial Handli	ing (if applicable)				
-		tified of all discrepancies with this order?	Yes	No 🗌	NA 🗹	
	Person	Notified: Date				
	By Who		P	Phone 🗌 Fax	In Person	
	Regardi					
	-	Istructions:				
19	Additional rer	narks:				1

Item Information

Item #	Temp °C
Cooler	4.8
Sample	1.0
Temp Blank	3.6

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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COC 1.2 - 2.22.17		Relinquished	hur	Relinquished
22.17			1	
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30	Chain of Custody Record & Laboratory Services Agreement
FIGMORT Seattle, WA 98103 Tel: 206-352-3790	Date: 6/27/14 Page: (of:) Laboratory Project No (internal): 1700/14 4
Anralykiwal) Fax: 206-352-7178	tName: 1001 Milnoy Ave
client: AFCAM	evernight
address IIII zid Ave, suite 1600	SH
0186	0
Telephone: 206-458-400	
Fax: 206-438-7699	PMEmail: david ran breget & gerom, com
	S S S I CO
Sample Sample Type	
Sample Name Date Time (Matrix)*	
1 Stockelile - 062217-1 6/22/17-1450 Soil	×
2 Stockolle-062217-2 6/22/17 1500 Soil	
3	
4	
5	
6	
7	
10 In the second	= Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water Turn-around Time:
Priority Pollutants TAL	Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti TI U V Zn
Nitrate Nitrite Chloride Sulfate	Bromide O-Phosphate Fluoride Nitrate+Nitrite
I represent that I am authorized to enter into this Agreement with the terms on the front and hackside of this Agreement.	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to
Date/Time	Received A 6 22 Date/Time 1022
Relinquished Date/Time	eceived Date/Time Same Day
×	x (specify)



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

AECOM David Raubvogel 1111 3rd Avenue Suite 1600 Seattle, WA 98101

RE: 1001 Minor Ave Work Order Number: 1707071

July 12, 2017

Attention David Raubvogel:

Fremont Analytical, Inc. received 3 sample(s) on 7/11/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Volatile Organic Compounds by EPA Method 8260C

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,

Mohl c. Kady

Mike Ridgeway Laboratory Director

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: AECOM Project: 1001 Minor Ave Work Order: 1707071 Lab Sample ID Client Sample ID 1707071-001 SP-071117-1 1707071 002 SD 071117-1		Work Order Sample Summary						
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received					
1707071-001	SP-071117-1	07/11/2017 9:00 AM	07/11/2017 10:06 AM					
1707071-002	SP-071117-2	07/11/2017 9:15 AM	07/11/2017 10:06 AM					
1707071-003	Trip Blank	07/10/2017 2:31 PM	07/11/2017 10:06 AM					



Case Narrative WO#: 1707071 Date: 7/12/2017

CLIENT: AECOM Project: 1001 Minor Ave

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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 & Acronyms



WO#: **1707071** Date Reported: **7/12/2017**

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



Analytical Report

 Work Order:
 1707071

 Date Reported:
 7/12/2017

Client: AECOM				Collection	Dat	e: 7/11/2017 9:00:00 AM
Project: 1001 Minor Ave Lab ID: 1707071-001				Matrix: So	.:	
				Watrix. 50	011	
Client Sample ID: SP-071117-1						
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	/Dx Ext.			Batch	ID:	17599 Analyst: SB
Diesel (Fuel Oil)	ND	20.2		mg/Kg-dry	1	7/11/2017 1:33:04 PM
Heavy Oil	ND	50.4		mg/Kg-dry	1	7/11/2017 1:33:04 PM
Surr: 2-Fluorobiphenyl	109	50 - 150		%Rec	1	7/11/2017 1:33:04 PM
Surr: o-Terphenyl	112	50 - 150		%Rec	1	7/11/2017 1:33:04 PM
Gasoline by NWTPH-Gx				Batch	ID:	17601 Analyst: NG
Gasoline	ND	6.66		mg/Kg-dry	1	7/12/2017 10:33:12 AM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	7/12/2017 10:33:12 AM
Surr: Toluene-d8	97.2	65 - 135		%Rec	1	7/12/2017 10:33:12 AM
Volatile Organic Compounds by EP	A Method	8260C		Batch	ID:	17601 Analyst: NG
Benzene	ND	0.0266		mg/Kg-dry	1	7/12/2017 10:33:12 AM
Toluene	ND	0.0266		mg/Kg-dry	1	7/12/2017 10:33:12 AM
Ethylbenzene	ND	0.0400		mg/Kg-dry	1	7/12/2017 10:33:12 AM
m,p-Xylene	ND	0.0266		mg/Kg-dry	1	7/12/2017 10:33:12 AM
o-Xylene	ND	0.0266		mg/Kg-dry	1	7/12/2017 10:33:12 AM
Surr: Dibromofluoromethane	99.6	56.5 - 129		%Rec	1	7/12/2017 10:33:12 AM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	7/12/2017 10:33:12 AM
Surr: 1-Bromo-4-fluorobenzene	102	63.1 - 141		%Rec	1	7/12/2017 10:33:12 AM
Sample Moisture (Percent Moisture				Batch	ID:	R37306 Analyst: CG
Percent Moisture	7.52	0.500		wt%	1	7/11/2017 12:05:26 PM



Analytical Report

 Work Order:
 1707071

 Date Reported:
 7/12/2017

Client: AECOM				Collection	Dat	e: 7/11/2017 9:15:00 AM
Project: 1001 Minor Ave Lab ID: 1707071-002				Matrix: So		
				Watrix. 50	011	
Client Sample ID: SP-071117-2						
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	<u>//Dx Ext.</u>			Batch	ID:	17599 Analyst: SB
Diesel (Fuel Oil)	ND	20.5		mg/Kg-dry	1	7/11/2017 3:43:02 PM
Heavy Oil	ND	51.3		mg/Kg-dry	1	7/11/2017 3:43:02 PM
Surr: 2-Fluorobiphenyl	113	50 - 150		%Rec	1	7/11/2017 3:43:02 PM
Surr: o-Terphenyl	116	50 - 150		%Rec	1	7/11/2017 3:43:02 PM
Gasoline by NWTPH-Gx				Batch	ID:	17601 Analyst: NG
Gasoline	ND	6.10		mg/Kg-dry	1	7/12/2017 11:02:43 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	7/12/2017 11:02:43 AM
Surr: Toluene-d8	96.7	65 - 135		%Rec	1	7/12/2017 11:02:43 AM
Volatile Organic Compounds by EP	A Method	8260C		Batch	ID:	17601 Analyst: NG
Benzene	ND	0.0244		mg/Kg-dry	1	7/12/2017 11:02:43 AM
Toluene	ND	0.0244		mg/Kg-dry	1	7/12/2017 11:02:43 AM
Ethylbenzene	ND	0.0366		mg/Kg-dry	1	7/12/2017 11:02:43 AM
m,p-Xylene	ND	0.0244		mg/Kg-dry	1	7/12/2017 11:02:43 AM
o-Xylene	ND	0.0244		mg/Kg-dry	1	7/12/2017 11:02:43 AM
Surr: Dibromofluoromethane	100	56.5 - 129		%Rec	1	7/12/2017 11:02:43 AM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	7/12/2017 11:02:43 AM
Surr: 1-Bromo-4-fluorobenzene	102	63.1 - 141		%Rec	1	7/12/2017 11:02:43 AM
Sample Moisture (Percent Moisture	•)			Batch	ID:	R37306 Analyst: CG
Percent Moisture	6.87	0.500		wt%	1	7/11/2017 12:05:26 PM



	707071									QC	SUMMA	RY REF	PORT
	ECOM								Discol	and Haave			
Project: 10	001 Minor A	Ave							Diesei	and Heavy			
Sample ID MB-17599)	SampType	: MBLK			Units: mg/	Kg	Prep Da	te: 7/11/2	017	RunNo: 373	319	
Client ID: MBLKS		Batch ID:	17599					Analysis Da	te: 7/11/2	017	SeqNo: 717	7154	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.0									
Heavy Oil			ND	50.0									
Surr: 2-Fluorobipher	nyl		21.8		20.00		109	50	150				
Surr: o-Terphenyl			21.3		20.00		106	50	150				
Sample ID LCS-1759	9	SampType	E LCS			Units: mg/	Kg	Prep Da	te: 7/11/2	017	RunNo: 37:	319	
Client ID: LCSS		Batch ID:	17599					Analysis Da	te: 7/11/2	017	SeqNo: 717	7153	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			486	20.0	500.0	0	97.2	65	135				
Surr: 2-Fluorobipher	nyl		22.7		20.00		114	50	150				
Surr: o-Terphenyl			24.8		20.00		124	50	150				
Sample ID 1707071-0	001ADUP	SampType	: DUP			Units: mg/	Kg-dry	Prep Da	te: 7/11/2	017	RunNo: 373	319	
Client ID: SP-07111	7-1	Batch ID:	17599					Analysis Da	te: 7/11/2	017	SeqNo: 717	7143	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND	20.8						0		30	
Heavy Oil			ND	52.0						0		30	
Surr: 2-Fluorobipher	nyl		23.6		20.79		113	50	150		0		
Surr: o-Terphenyl			23.8		20.79		115	50	150		0		
Sample ID 1707071-0	001AMS	SampType	: MS			Units: mg/	Kg-dry	Prep Da	te: 7/11/2)17	RunNo: 373	319	
Client ID: SP-07111	7-1	Batch ID:	17599					Analysis Da	te: 7/11/2	017	SeqNo: 717	7144	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			455	20.2	506.2	0	89.9	65	135				
Surr: 2-Fluorobipher	nyl		21.0		20.25		104	50	150				
Surr: o-Terphenyl			24.3		20.25		120	50	150				



Work Order: 1707071 CLIENT: AECOM							Diesel	QC S and Heavy	SUMMAI Oil by NW		
Project: 1001 Mine Sample ID 1707071-001AMS	SampType: MS			Units: mg/K	a-drv	Prep Da		-	RunNo: 37;		
Client ID: SP-071117-1	Batch ID: 17599			onito. Ing/it	guiy	Analysis Da			SeqNo: 717		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1707071-001AMSD	SampType: MSD			Units: mg/K	g-dry	Prep Da	ite: 7/11/20	017	RunNo: 373	319	
•	SampType: MSD Batch ID: 17599			Units: mg/K		Prep Da Analysis Da			RunNo: 373 SeqNo: 717		
Client ID: SP-071117-1		RL	SPK value	Units: mg/K		•	ite: 7/11/20				Qual
Client ID: SP-071117-1 Analyte	Batch ID: 17599	RL 20.6	SPK value 515.4		-	Analysis Da	ite: 7/11/20	017	SeqNo: 717	7145	Qual
Sample ID 1707071-001AMSD Client ID: SP-071117-1 Analyte Diesel (Fuel Oil) Surr: 2-Fluorobiphenyl	Batch ID: 17599 Result			SPK Ref Val	%REC	Analysis Da	te: 7/11/20 HighLimit	017 RPD Ref Val	SeqNo: 717 %RPD	7145 RPDLimit	Qual



Work Order: CLIENT: Project:	1707071 AECOM 1001 Minor	Ave								QC S	SUMMAF Gasoline		
Sample ID LCS-17	7601	SampType	LCS			Units: mg/Kg	I	Prep Da	te: 7/11/2	017	RunNo: 373	330	
Client ID: LCSS		Batch ID:	17601					Analysis Da	te: 7/12/2	017	SeqNo: 717	7321	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			25.5	5.00	25.00	0	102	65	135				
Surr: Toluene-d8	3		1.22		1.250		97.9	65	135				
Surr: 4-Bromoflu	orobenzene		1.25		1.250		99.9	65	135				
Sample ID MB-17	601	SampType	MBLK			Units: mg/Kg		Prep Da	te: 7/11/2	017	RunNo: 373	330	
Client ID: MBLK	S	Batch ID:	17601					Analysis Da	te: 7/12/2	017	SeqNo: 717	7322	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	5.00									
Surr: Toluene-d8	3		1.22		1.250		97.3	65	135				
Surr: 4-Bromoflu	orobenzene		1.24		1.250		98.9	65	135				
Sample ID 170707	71-001BDUP	SampType	: DUP			Units: mg/Kg	-dry	Prep Da	te: 7/11/2	017	RunNo: 373	330	
Client ID: SP-071	1117-1	Batch ID:	17601				-	Analysis Da	te: 7/12/2	017	SeqNo: 717	7318	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	6.66						0		30	
Surr: Toluene-d8	3		1.60		1.665		95.9	65	135		0		
Surr: 4-Bromoflu	orobenzene		1.76		1.665		106	65	135		0		



Work Order:	1707071								00.5	SUMMAF		ORT
CLIENT:	AECOM								-			
Project:	1001 Minor A	ve							Sample Mo	oisture (Pe	ercent MC	oisture)
Sample ID 17070	71-002ADUP	SampType: DUP			Units: wt%		Prep Date	: 7/11/20)17	RunNo: 373	306	
Client ID: SP-07	1117-2	Batch ID: R37306					Analysis Date	: 7/11/20)17	SeqNo: 716	6791	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		7.30	0.500						6.870	6.13	20	



Work Order: 1707										QC S	SUMMAI	RY REF	ORT
CLIENT: AEC	COM								.	0		. Mathad	00000
Project: 1001	1 Minor Av	ve						volatile	Organic	: Compoun	as by EP/	A Method	8260C
Sample ID LCS-17601		SampType	: LCS			Units: mg/Kg		Prep Date:	7/11/20	17	RunNo: 37	329	
Client ID: LCSS		Batch ID:	17601					Analysis Date:	7/12/20	17	SeqNo: 71	7326	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			1.05	0.0200	1.000	0	105	64.3	133				
Toluene			1.06	0.0200	1.000	0	106	67.3	138				
Ethylbenzene			1.04	0.0250	1.000	0	104	74	129				
m,p-Xylene			2.04	0.0500	2.000	0	102	70	124				
o-Xylene			1.01	0.0250	1.000	0	101	68.1	139				
Surr: Dibromofluoromet	thane		1.29		1.250		103	56.5	129				
Surr: Toluene-d8			1.33		1.250		106	64.5	151				
Surr: 1-Bromo-4-fluorob	benzene		1.28		1.250		103	63.1	141				
Sample ID MB-17601		SampType				Units: mg/Kg		Prep Date:	7/11/20	17	RunNo: 37	329	
		Batch ID:											
Client ID: MBLKS		Datch ID.	17601					Analysis Date:	//12/20	17	SeqNo: 71	1321	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			ND	0.0200									
Toluene			ND	0.0200									
Ethylbenzene			ND	0.0250									
m,p-Xylene			ND	0.0500									
o-Xylene			ND	0.0250									
Surr: Dibromofluoromet	thane		1.29		1.250		103	56.5	129				
Surr: Toluene-d8			1.25		1.250		99.7	64.5	151				
Surr: 1-Bromo-4-fluorob	benzene		1.21		1.250		96.7	63.1	141				
Sample ID 1707071-001E	BDUP	SampType	: DUP			Units: mg/Kg-	dry	Prep Date:	7/11/20	17	RunNo: 37	329	
Client ID: SP-071117-1		Batch ID:						Analysis Date:			SeqNo: 71		
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	•		RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			ND	0.0266						0		30	
Toluene			ND	0.0266						0		30	
				0.0200						0		50	

Ethylbenzene

m,p-Xylene

ND

ND

0.0333

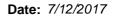
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Work Order:1707071CLIENT:AECOMProject:1001 Minor	Ave					Volatile	Organi	QC S c Compoun	SUMMA ds by EP/		-
Sample ID 1707071-001BDUP Client ID: SP-071117-1	SampType: DUP Batch ID: 17601			Units: mg/k	• •	Prep Dat Analysis Dat	te: 7/11/20 te: 7/12/20		RunNo: 37: SeqNo: 71		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0333						0		30	
Surr: Dibromofluoromethane	1.67		1.665		100	56.5	129		0		
Surr: Toluene-d8	1.80		1.665		108	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.72		1.665		104	63.1	141		0		



CI	ient Name:	URS	Work Order Num	ber: 1707071	
Lo	ogged by:	Clare Griggs	Date Received:	7/11/2017	7 10:06:00 AM
<u>Cha</u>	in of Cust	ody			
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present
2.	How was the	sample delivered?	<u>Client</u>		
<u>Log</u>	<u>In</u>				
-	Coolers are p	present?	Yes 🖌	No 🗌	
	Chipping con	toiner/appler in good condition?	Yes 🖌	No 🗌	
		tainer/cooler in good condition?		_	
5.		Is present on shipping container/cooler? nments for Custody Seals not intact)	Yes 🗋	No 🗌	Not Required
6.	Was an atter	npt made to cool the samples?	Yes	No 🖌	NA 🗌
		Sample	s received straight	<u>t from field.</u>	
7.	Were all item	is received at a temperature of $>0^{\circ}C$ to $10.0^{\circ}C^{*}$	Yes	No 🗌	NA 🔽
			—	_	
8.	Sample(s) in	proper container(s)?	Yes 🗹	No 🗌	
9.	Sufficient sar	mple volume for indicated test(s)?	Yes 🖌	No 🗌	
10.	Are samples	properly preserved?	Yes 🖌	No	
11.	Was preservation	ative added to bottles?	Yes 🗌	No 🗹	NA 🗌
12.	Is there head	lspace in the VOA vials?	Yes	No 🗌	NA 🔽
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🖌	No 🗌	
14.	Does paperw	ork match bottle labels?	Yes 🖌	No 🗌	
15	Are matrices	correctly identified on Chain of Custody?	Yes 🗹	No 🗌	
-		at analyses were requested?	Yes 🗹		
		ling times able to be met?	Yes 🗹		
<u>Spe</u>	cial Handl	ing (if applicable)			
18.	Was client no	otified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
	Person	Notified: Date			
	By Who		P	one 🗌 Fax	In Person
	Regardi	,			
	-	nstructions:			
10	Additional rer	- marks:			

Item Information

Item #	Temp ⁰C
Cooler	16.6
Sample	16.8
Temp Blank	17.8

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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NUME Section of the sector o	Standard	Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V	B Ba Be Ca Cd Co	TAL	Priority Pollutant	RCRA-8	**Metals (Circle): MTCA-5	**Met
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Turn-around Time:	GW = Ground Water, SW = Storm Water,	SL = Solid, W = Water,			B = Bulk,	Matrix: A = Air, AQ = Aqueous,	*Matri
Owner Senting with with some source of the sou								10
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Appendix E



SITE CHECK/SITE ASSESSMENT CHECKLIST

County: ____King____

UST ID #: _____

FOR UNDERGROUND STORAGE TANKS

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360 WAC. Instructions are found on the last page.

I. UST	Facility	II. OWNER/OPERA	ATOR INFORMAT	ION			
Facility Compliance Tag #:		Owner/Operator Name: Nas Investors, LLC	h-Holland 1001	Minor			
UST ID #:		Business Name: NA					
Site Name: 1001 Minor Aven	ue Property	Address: 1000 Dexter Avenu	e North, Suite 2	01			
Site Address: 1001 Minor Av	enue/1122 Madison Street	City: Seattle	State: WA	Zip: 98109			
City: Seattle		Phone: 206-707-4604					
Phone: 206-707-4604		Email: nhoffman@hollandpartnergroup.com					
	III. Certified	Site Assessor					
Service Provider Name: Laur	ence Brown	Company Name: AECOM					
Cell Phone: 206-300- 2893	ail: y.a.brown@aecom.com	Address: 1111 3 rd Avenue, St	uite #1600				
Certification #: 8708205	Exp. Date: 12/13/2018	City: Seattle	State: WA	Zip: 98101			
	IV. Tank I	NFORMATION	-				
Tank ID	TANK CAPACITY	Last Substance Stored		CHECK OR CONDUCTED			
UST A	~1,700 Gallons	Gasoline	5/8/2017				
UST B	~300 Gallons	Waste Oil	5/4/	2017			
UST C	~800 Gallons	Heating Oil	5/12/	/2017			
UST D	~2,800	Bunker Oil	5/15/	/2017			
V. Ri	eason for Conducting Site	CHECK/SITE ASSESSMENT (che	ck one)				
□ Release investigation fo	llowing permanent UST systen	n closure (i.e. tank removal or cl	osure-in-place).				
□ Release investigation fo	llowing a failed tank and/or lir	ne tightness test.					
□ Release investigation fo	llowing discovery of contamin	ated soil and/or groundwater.					
Release investigation di	rected by Ecology to determin	e if the UST system is the source	e of offsite impa	cts.			
, , , , , , , , , , , , , , , , , , ,	ng a "change-in-service", which n-regulated substance (e.g. w	h is changing from storing a regu ater).	ulated substance	e (e.g.			
Directed by Ecology for	UST system permanently close	ed or abandoned before 12/22/	1988.				
ECY 010-158 (Rev. Jan. 2015)							

\boxtimes	Other (describe): UST decommissioning/removal as a result of property redevelopment/excavation.			
	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 Guidance for Site Checks and Site Assessments for Underground Storage Tanks.	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)	\boxtimes		
5.	Is there any apparent groundwater in the tank excavation?		\boxtimes	
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.	8. The following items are provided in one or more sketches:			
	Location and ID number for all field samples collected	\boxtimes		
	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		\boxtimes	
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 173-360-360 through -395.				
Laurence Brown 6/2/2				
Pri	Int or Type Name Signature of Certified Site Assessor Date			

SITE CHECK/SITE ASSESSMENT CHECKLIST FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This checklist must accompany the results of a Site Check Report, which is performed if a release of petroleum or other regulated substance is suspected. It is also required to accompany a Site Assessment Report, which is required following the permanent closure or "change-in-service" of an underground storage tank system. <u>This form is required to be filled out whether or not contamination is found</u>. This checklist is to be completed by the Site Assessor and submitted **within thirty days of completing** these activities to the following address:

Dept. of Ecology UST Section PO Box 47655 Olympia, WA 98504-7655

- **I./II. UST Facility and Owner/Operator Information:** Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number.
- **III.** Service Provider Information: It is the responsibility of the ICC-certified Site Assessor to ensure that sampling and documentation procedures are completed in accordance with Ecology's *Guidance for Site Checks and Site Assessment for Underground Storage Tanks*.
- **IV. Tank Information:** Use the same Tank identification numbers listed on the facility's Business License which is based on the most recent UST Addendum on file with Ecology. List the last substance stored in each tank, the tank sizes and the date the site check or site assessment was completed.
- V. Required Signature: The Site Assessor signature certifies these procedures were followed.

All confirmed releases must be reported to Ecology by the owner within 24 hours and by service providers within 72 hours of discovery. A Site Characterization Report must be submitted to Ecology within 90 days after confirming a release.

Further questions? Please contact your regional office below and ask for a tank inspector to assist you.

Regional Office	Counties Served		
Central (509) 575-2490	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima		
Eastern (509) 329-3400	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman		
HQ (360) 407-7170	Federal facilities in Western Washington		
Northwest (425) 649-7000	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom		
Southwest (360) 407-6300	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum		

or find a complete list of UST inspectors at:

www.ecy.wa.gov/programs/tcp/ust-lust/people.html



LETTER OF CERTIFICATION

May 4th, 2017

Hos Brothers Construction, Inc. 733 West Bostian Road Woodinville, Washington 98072

RE: Commercial Underground Heating Oil Tank at 1001 Minor Avenue Seattle, Washington 98104

This is to certify that Filco Company, Inc. has removed one approximate 300 gallon underground commercial heating oil tank from the above named property. The tank and its contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suctens

Phil Suetens President Filco Co., Inc.

Thuge of of 41 m RECEIVED Nour Seattle PERMIT SECTION Image: Seattle Pire Department APPLICATION FOR TEMPORARY PERMIT Image: Seattle Permit Department Commercial Tank Removal/Decommissioning Permit Pres: S55.00 Date Issued: K-U-C/ Code 7908 Commercial Tank Removal/Decommissioning Permit Pres: S55.00 Date Issued: K-U-C/ Conscruences Task(0) must be removed from site on the same day as permit is issued! Permit Pres: S55.00 Task(0) must be removed from site on the same day mapermit is issued! Imm NAME File Ocompany, Inc. MALLING ADDIUSS PO BOX 31228 SUITR Corry Seattle RTATE WA 219 98103 Donsmit Addresses Ionsmit Addresses 1001 Minor Ave Donsmit inspection Ave Donsmit Addresses Dons of addresses Coverage Task (0): Two Trank (0): Waste CI (300) Impose Number (2006) 423-1092 Number of Tank(0): Two Trank (0): Support Task (0): Two Task (0): Support Task (0)5/01/2017 MON 11:25	PAX SBATT:	LE FIRE		2001/00
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CONTACT PERSON JOSh Hilton PHONE NUMBER (206) 423-1092 Number of Tank(s): Two Tank Size(s): 2000 and 300 Aboveground tank Product(s) Previously Contained; Generative (2000) and Waste Oil (300) Underground tank Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents) Abandonment-In-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquide and/or unknowns) Hot work being conducted: No Yes (If yes, a separate hot work pormit is required) Permit applications may be submitted in person weekdays from 8:00 n.m. to 4:30 p.m., or mailed to: Seattle Fire Department Fire Marshal's Office – Permits To pay with a Vise or Master Card: Fax or email this application Pire Marshal's Office – Permits Then CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT 220 Third Ave 8, 2 rd Floor Tel: (206) 386-1450 / Fax: (206) 336-1348 Seattle, WA 98104-2608 E-mail: parmits@seatle.gov Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSU/INCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the atlached conditions. Tank remove//decommission the partemed, or	city Seattle		STATE WA	ZIP 98103	
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Product(s) Previously Contained; Geschine (2000) and Waste Oil (300) ☑ Underground tank ☑ Removal (Marine Chemist inspection and certificato required for all tanks regardless of size or contents) □ □ Abandomment-In-Place (Marine Chemist certificato required for tanks previously containing Class I flammable liquide and/or unknowns) □ □ Hot work being conducted: ☑ No □ Yes (If yes, a separate hot work permit is required) Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to: Seattle Fire Department To pay with a Vise or Master Card: Fax or email this application Fire Marshal's Office – Permits To pay with a Vise or ONFIRM RECEIPT AND MAKE PAYMENT Tel: (206) 386-1450 / Fax: (206) 386-1348 Seattle, WA 98104-2608 E-mail: parmits@seatile.gov Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the atlached conditions, and all applicable provisions of the Seattle IFire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Seattle was removeldecommissioning must be performed, or directly supervised, by an ICC cartified Individual (MAC 173-350-	CONTACT PERSON JOS!	1 Hilton	PHONE NUMBE	R (206) 423-1092	
Product(s) Previously Contained; Geschine (2000) and Waste Oil (300) ☑ Underground tank ☑ Removal (Marine Chemist inspection and certificato required for all tanks regardless of size or contents) □ Abandomment-in-Place (Marine Chemist certificato required for tanks previously containing Class I flammable liquide and/or unknowns) □ Hot work being conducted: ☑ No □ Yes (If yes, a separate hot work permit is required) Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to: Seattle Fire Department Fire Marshal's Office – Permits To pay with a Vise or Master Card: Fax or email this application Yes (1f yes, a separate hot work permit is application THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT 220 Third Ave S, 2 ^{ad} Floor Tel: (206) 386-1450 / Fax: (206) 386-1348 Seattle, WA 98104-2608 E-mail: parmits@seattle.groy Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSU/(NCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the atlached conditions. and all applicable provisions of the Seattle If the Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions	Number of Tank(s); Two	Tank Size	(s): 2000 and 300	Aboveground tank	
☑ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents) □ Abandomment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns) □ Hot work being conducted: ☑ No □ Yes (If yes, a separate hot work permit is required) Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or malled to: Seattle Fire Department To pay with a Visa or Master Card: Fax or email this application Pire Marshal's Office – Permits ThEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT 220 Third Ave S, 2 ^{ad} Floor Tel: (206) 386-1450 / Fax: (206) 386-1348 Seattle, WA 98104-260B E-mail: permits@seatile.gov Call 386-1450, at least 24 hours prior to needed Inspection lime to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSU/INCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in aboordance with the atlached conditions, all noted special conditions, and all applicable provisions of the Seattle Pire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Tenk remover/decommissioning must be performed, or directly supervised, by an ICC certificate #4/68-78 Name of Marine Chefuist Ce	Product(s) Previously Con				
□ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquide and/or unknowns) □ Hot work being conducted: □ No □ Yes (If yes, a separate hot work permit is required) Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to: Seattle Fire Department To pay with a Visa or Master Card: Fax or email this application Fire Marshal's Office – Permits To pay with a Visa or Master Card: Fax or email this application THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT 220 Third Ave 8, 2 ^{ad} Floor Seattle, WA 98104-2608 E-mail: parmits@seattle.gov Call 396-1450, at least 24 hours prior to needed inspection lime to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSU/INCE OF THIS FIRE DEPARTMENT PERMITI Permission is hareby granted to remove or decommission the tank(s) identified in this permit in accordance with the atlached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Tank removel/decommissioning must be performed, or directly supervised, by an ICC cartified individual (MAC 173-380-400 FMO USE: Special permit conditions: Tank removel/decommissioning must be performed, or directly su	Removal (Marine Cha	mist inspection and cer	tificate required for all tanks rega	-	
Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to: Seattle Fire Department Fire Marshal's Office – Permits 220 Third Ave S, 2 nd Floor Seattle, WA 98104-2608 Call 396-1459, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the atlached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Tank remove/decommissioning must be performed, or directly supervised, by an ICC caritined individual (WAC 173-380-400 FMO USE: AFPROVED BY: Check No.: 9.3.91.0.5.0.1.1 Impector: Gain Marke Decommission flag from definite to acritical individual (WAC 173-380-400 FMO USE: AFPROVED BY: Check No.: 9.3.91.0.5.0.1.1 Impector: Gain of Marke Checking Application ID#: 0.0.5.6.9.1.1	Abandonment-in-Place				liquids
Seattle Fire Department To pay with a Visa or Master Card: Fax or email this application Fire Marshal's Office – Permits The Parmits 220 Third Ave S, 2 rd Floor Fax: (206) 386-1450 / Fax: (206) 386-1348 Seattle, WA 98104-2608 E-mail: parmits@seattle.gov Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, foderal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Tank removal/decommissioning must be performed, or directly supervised, by an ICC certificate individual (WAC 173-380-800 FMO USE: APPROVED BY: Check No:: 939105011 Receipt No:: S-2717.631 Application ID#: 10 386.4 Date: Sector Date: Sector	Hot work being condu	stod: 🗹 No	🔲 Yos (If yes, a set	parate hot work pormit is require	d)
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMITI Permission is hereby granted to remove or decommission the tank(s) identified in this permit in abcordance with the atlached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED Special permit conditions: Tank removal/decommissioning must be performed, or directly supervised, by an ICC cartilled individual (WAC 173-380-600 FMO USE: Check No.: O 3 9 1 0 5 0 11 1 Receipt No.: SFD ID# 13(D) Name of MayIne Cheginst Certificate # 468 7 8 Date: S = Y - Manual	Seattle Firs Departmen Fire Marshal's Office - 220 Third Ave S, 2 nd Fi	t - Permits Ioor	To pay with a Visa or Ma THEN CALL US TO CONFI Tel: (206) 386-1450 / Fax	ster Card: Fax or email this app RM RECEIPT AND MAKE PAYIV :: (206) 386-1348)lication IENT
FMO USE: Check No.: 9391050117 Check No.: 9391050117 Receipt No.: 5-274631 Application ID#: 08869	TANKS MAY B NO HOT WORK IS ALL	E REMOVED/DECO OWED ON A TANK	MMISSIONED ONLY AFTER FI SYSTEM PRIOR TO ISSUANC	IRE DEPARTMENT INSPECTI E OF THIS FIRE DEPARTMEN	ON NT PERMITI
FMO USE: APPROVED BY: Check No.: 9391050117 Check No.: 5-274631 Inspector: Genif Marine Chemist SFD ID# 1300 Name of Marine Chemist Certificate # £16878 Application ID#: 08869	conducting, all noted absci	al conditions, and a	ll applicable provisions of the	Seattle Rive Code Sodaral -	th the atlachod tate and local
Check No.: 93905011 Inspector: 93905011 Receipt No.: 5-274631 Inspector: 93905011 Application ID#: 08869 Date: 5-4-17	Special permit conditions:	Tank removal/decommiss	ioning must be performed, or directly s	upervised, by an ICC cartilled individua	l (WAC 173-350-600)
Check No.: 93905011 Inspector: 93905011 Receipt No.: 5-274631 Inspector: 93905011 Application ID#: 08869 Date: 5-4-17	·		· · · · · · · · · · · · · · · · · · ·		
Receipt No.: 5-274631 Name of Marine Chemist Structure Structure<		30117			
Application ID#: 08669 Date: 5-4-17	Receipt No.: 5 - 2	7463			10-10
(01/17)					
	(**/*/)				

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May 8th, 2017

Hos Brothers Construction, Inc. 733 West Bostian Road Woodinville, Washington 98072

RE: Commercial Underground Heating Oil Tank at 1001 Minor Avenue Seattle, Washington 98104

This is to certify that Filco Company, Inc. has removed one approximate 2,000 gallon underground commercial heating oil tank from the above named property. The tank and its contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suctens

Your Seattle	RECEIVED Man 5/8/17 MAY 05 2018 @ 9AMI-JGT PERMIT SECTION
Fire Department	TON FOR TEMPORARY PERMIT
Code 7908 . Commercial	Tank Removal/Decommissioning
Permit Fee: \$255.00 To be completed by permit applicant	Date Issued: <u>208/17</u> Tank(s) must be removed from site on the same day as permit is issued!
FIRM NAME Filco Company, Inc.	
MAILING ADDRESS PO Box 31228	SUITE
CITY Seattle	STATE WA ZIP 98103
JOBSITE ADDRESS 1001 Minor Ave	
CONTACT PERSON Josh Hilton	PHONE NUMBER (206) 423-1092
Number of Tank(s) Two ON & Tank Size(s)	: 2000 🖸 Aboveground tank
Product(s) Previously Contained: Gasoline	Underground tank
Removal (Marine Chemist inspection and certi	ficate required for all tanks regardless of size or contents)
Abandonment-in-Place (Marine Chemist certifi and/or unknowns)	icate required for tanks previously containing Class I flammable liquids
Hot work being conducted: 🛛 No	Yes (If yes, a separate hot work permit is required)
Permit applications may be submitted in person w Seattle Fire Department	eekdays from 8:00 a.m. to 4:30 p.m., or mailed to: To pay with a Visa or Master Card: Fax or email this application

Fire Marshal's Office - Permits 220 Third Ave S, 2nd Floor Seattle, WA 98104-2608

THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT Tel: (206) 386-1450 / Fax: (206) 386-1348 E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment. TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED

Special permit conditions: Tank removal/decommissioning must be performed, or directly supervised, by an ICC certified individual (WAC 173-360-600)

FMO USE: Check No.: <u>944/050517</u> Receipt No.: <u>5-274897</u> Application ID#: <u>10894</u>	APPROVED BY: Inspector:
(01/17)	

FILCO COMPANY INC.		In	voice
PO BOX 31228 SEATTLE, WA 98103		DATE	INVOICE #
(206) 547-8347	(1)	5/10/2017	37243
BILL TO	JOB LOCATION		
HOS BROTHERS CONSTRUCTION PO BOX 1788 WOODINVILLE, WA 98072-1788	1001 MINOR AVI SEATTLE, WA 98		

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		JOB NUMBER	TËR	MS
		26539	DUE ON	RECEIPT
ITEM	DESCRIPTION			AMOUNT
R/SR	PUMP OUT, HAUL AWAY AND PROPERLY GALLON AND ONE 2,000 GALLON OIL TA		E 300	8,650.00
R/RQ	DISPOSAL OF 100 GALLONS OF WATER FI \$1/GALLON	ROM 300 GALLON	N UST @	100.00
R/RQ	DISPOSAL OF 200 GALLONS OF PEA GRAV @ \$2/GALLON	VEL FROM 300 GA	ALLON UST	400.00
R/RQ	DISPOSAL OF 675 GALLONS OF WATER FI \$1/GALLON	ROM 2,000 GALLO	ON TANK @	675.00
	SUBTOTAL OF CHARGES			9,825.00
RESALE		Subtotal		\$9,825.00
	ICATE OF DECOMMISSIONING AN		(10.1%)	\$0.00
	T (IF APPLICABLE) WILL BE SENT PON RECEIPT OF PAYMENT.	Total		\$9,825.00
If you would	like to pay with a credit card, please call us and we can ta	Payments	/Credits	-\$9,825.00
in you would	the information over the phone!	Balance	Due	\$0.00



May 12th, 2017

Hos Brothers Construction, Inc. 733 West Bostian Road Woodinville, Washington 98072

RE: Commercial Underground Heating Oil Tank at 1001 Minor Avenue Seattle, Washington 98104

This is to certify that Filco Company, Inc. has removed one approximate 675 gallon underground commercial heating oil tank from the above named property. The tank and its contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suetens

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Fi 5/12/12 pm	Fri	5/12	11	e pm
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Your Scattle Fire Department APPLICATI	ON FOR TEMPORARY PERMIT
Code 7908 Commercial	Fank Removal/Decommissioning
Permit Fee: \$255.00	Date Issued: $5 - (2 - 17)$ Tank(s) must be removed from site on the same day as permit is issued!
FIRM NAME FILCO Company, Inc.	
MAILING ADDRESS PO Box 31228	SUITE
crry. Seattle	STATE WA ZIP 98103
JOBSITE ADDRESS 1001 Minor AVE	- // · //
CONTACT PERSON Josh Hilton	PHONE NUMBER (206) 423-1092
Number of Tank(s): One Tank Size(s):	1200 Aboveground tank
Product(s) Previously Contained: Heating Oil	Z Underground tank
Removal (Marine Chemist inspection and certifi	cate required for all tanks regardless of size or contents)
Abandonment-in-Place (Marine Chemist certific and/or unknowns)	ate required for tanks previously containing Class I flammable liquids
Hot work being conducted: 🛛 No	Yes (if yes, a separate hot work permit is required)
Permit applications may be submitted in person we	ekdays from 8:00 a.m. to 4:30 p.m., or mailed to:
Scattle Fire Department Fire Marshal's Office – Permits 220 Third Ave S, 2 ^{mi} Floor Seattle, WA 98104-2608	To pay with a Visa or Master Card: Fax or email this application THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT Tel: (206) 386-1450 / Fax: (206) 386-1348 E-mail: <u>permits@seattle.gov</u>
Call 386-1450, at least 24 hours prio	r to needed inspection time to arrange for an appointment.
and the second process of the second	NISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SY	STEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!
conditions, all noted special conditions, and all a	ission the tank(s) identified in this pormit in accordance with the attached applicable provisions of the Seattle Fire Code, federal, state and local IF PERMIT CONDITIONS ARE NOT ATTACHED
Special permit conditions: <u>Tank removal/decommission</u>	alng must be performed, or directly supervised, by an ICC certified individual (WAC 173-360-600)
Check No.: 949005/117 In Receipt No.: 5-275082 No	spector: <u>Juny</u> SFD ID# 1310 ame of Marine Chemist Certificate # 4686-7
Application ID#: /DY919 Di	ate: <u>3-17-17</u>

(01/17)

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RECFIVED

JUL 3 1 2017

NOTICE TO OWNER

IMPORTANT: READ BOTH SIDES OF THIS NOTICE CAREFULLY JOS BROS. CONSTRUCTION PROTECT YOURSELF FROM PAYING TWICE.

Date: July 27, 2017

To: GEORGETOWN CROSSROADS, LLC C/O PROLOGIS, 4545 AIRPORT WAY, DENVER, CO 80239 GEORGETOWN CROSSROADS, LLC C/O PROLOGIS, 12720 GATEWAY DR #110, TUKWILA, WA 98168

From: GRANITE PRECASTING & CONCRETE, INC.

RE: PROJECT SOUNDER, 4TH AVE S & S FRONT ST, SEATTLE, WASHINGTON

AT THE REQUEST OF (Materials/services ordered by): HOS BROTHERS PO BOX 1788, WOODINVILLE, WA 98072

THIS IS NOT A LIEN: this is sent to you to tell you who is providing professional services, materials, or equipment for the improvement of your property and to advise you of the rights of these persons and your responsibilities. Also take note that laborers on your project may claim a lien without sending you a notice.

OWNER/OCCUPIER OF EXISTING RESIDENTIAL PROPERTY

Under Washington law, those who furnish labor, professional services, materials or equipment for the repair, remodel, or alteration of your owner-occupied principal residence and who are not paid, have the right to enforce their claim for payment against your property. This claim is known as a construction lien.

The law limits the amount that a lien claimant can claim against your property for Professional Services, Materials and Equipment. Claims may only be made against that portion of the contract price you have not paid to your prime contractor as of the time this notice was given to you or three days after this notice was mailed to you. Review the back of this notice for more information and ways to avoid lien claims.

COMMERCIAL AND/OR NEW RESIDENTIAL PROPERTY

We have or will be providing professional services, materials or equipment for the improvement of your commercial or new residential project. In the event you or your contractor fail to pay us, we may file a lien against your property. A lien may be claimed for all professional services, materials or equipment furnished after a date that is sixty days before this notice was mailed to you, unless the improvement to your property is the construction of a new single-family residence, then ten days before this notice was mailed to you.

Sender:GRANITE PRECASTING & CONCRETE, INC.Address:4116 BAKERVIEW RD.
BELLINGHAM, WA 98226Phone:(360) 671-2251

Brief description of professional services, materials or equipment provided or to be provided: UNDERGROUND PRECAST CONCRETE STRUCTURES

**** IMPORTANT INFORMATION ON REVERSE SIDE ****

CC: HOS BROTHERS SIERRA CONSTRUCTION CO., INC.

Order #17-071440, dated July 25, 2017

FILCO COMPANY INC. PO BOX 31228			Inv	oice
SEATTLE, WA 98103			DATE	INVOICE NO.
(206) 547-8347	(1)		5/16/2017	37262
BILL TO	201 10	B LOCATION		
HOS BROTHERS CONSTRUCTION PO BOX 1788 WOODINVILLE, WA 98072-1788		I MINOR A TTLE, WA		

		TERMS	JOB NUMBER
		DUE ON RECEIPT	26539
ITEM	DESCRIPTION		AMOUNT
R/SR	PUMP OUT, HAUL AWAY AND PROPER 675 GALLON OIL TANK	RLY DISPOSE OF	4,500.00
R/RQ	DISPOSE OF 500 GALLON OF PEA GRA	VE @ \$2/GALLON	1,000.00
	SUBTOTAL OF CHARGES		5,500.00
RESALE		Total	\$5,500.00
		Payments/Credit	s -\$5,500.00
		Balance Due	\$0.00



May 18th, 2017

Hos Brothers Construction, Inc. 733 West Bostian Road Woodinville, Washington 98072

RE: Commercial Underground Heating Oil Tank at 1001 Minor Avenue Seattle, Washington 98104

This is to certify that Filco Company, Inc. has removed one approximate 2,800 gallon underground commercial heating oil tank from the above named property. The tank and its contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suctens

FILCO COMPANY INC.		In	voice
PO BOX 31228		DATE	INVOICE #
SEATTLE, WA 98103 (206) 547-8347		5/24/2017	37287
	2011		
BILL TO	JOB LOCATION		
HOS BROTHERS CONSTRUCTION PO BOX 1788 WOODINVILLE, WA 98072-1788	1001 MINOR AV SEATTLE, WA 9		

		JOB NUMBER	TER	MS
		26539	DUE ON	RECEIPT
ITEM	DESCRIPTION			AMOUNT
R/SR	PUMP OUT, HAUL AWAY AND PROPERLY OIL TANK	DISPOSE OF 2,80	0 GALLON	5,350.00
	SUBTOTAL OF CHARGES			5,350.00
RESALE		Subtotal		\$5,350.00
CERTIFI	CATE OF DECOMMISSIONING AN	D Sales Tax	(10.1%)	\$0.00
PERMI	T (IF APPLICABLE) WILL BE SENT PON RECEIPT OF PAYMENT.			\$5,350.00
		Payments	/Credits	-\$5,350.00
If you would li	the information over the phone!	Balance	Due	\$0.00

	SEATTLE FIRE	Tunsa	5/18/17 @ 1/1900
Х	ACORIVI		
Your	(14Y - 1 6 ZE		
Seattle Fire Department	PERMIT SECT		
	PPLICATION FOR TEMPORA	RY PERMIT	
Code 7908 Con	amercial Tank Removal/De	commissioning	5 1 1
Permit Fee: \$255.00	100		te Issued: 5/18/17
O BE COMPLETED BY PERMIT APPLIC	ANT	oved from site on t	he same day as permit is iss
FIRM NAME Filco Company,	Inc.	·····	
MAILING ADDRESS PO Box 312	228	, Šl	UITE
CITY Seattle	STATE W	A z	P 98103
JOBSITE ADDRESS 1001 Minor	Ave		
CONTACT PERSON Josh Hilton	PHONE NU	MBER (206) 42	23-1092
Number of Tank(s): ONO	Tank Size(s): 1500	Above	ground tank
		- Undow	round tank
 Product(s) Previously Contained: <u>He</u> Removal (Marine Chemist inspect Abandonment-in-Place (Marine Cand/or unknowns) 	ion and certificate required for all tanks homist certificate required for tanks pre	regardless of size over the size of si	or contents)
 Product(s) Previously Contained: He Removal (Marine Chemist inspect Abandonment-in-Place (Marine Cland/or unknowns) Hot work being conducted: I 	ion and certificate required for all tanks homist certificate required for tanks pre I No I Yes (If yes, in person weekdays from 8:00 a.m. to To pay with a Visa o	a separate hot work o 4:30 p.m., or mai	or contents) Class I flammable liquids k permit is required) led to: or email this application
 Product(s) Previously Contained: He Removal (Marine Chemist inspect Abandonment-in-Place (Marine Cland/or unknowns) Hot work being conducted: If remit applications may be submitted Seattle Fire Department 	ion and certificate required for all tanks homist certificate required for tanks pre I No I Yes (If yes, in person weekdays from 8:00 a.m. to To pay with a Visa o	s regardless of size of viously containing a separate hot work o 4;30 p.m., or mai r Master Card: Fax ONFIRM RECEIPT A / Fax: (206) 386-13	or contents) Class I flammable liquids k permit is required) led to: or email this application AND MAKE PAYMENT
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A MARINE ALLER 27 A REAL MARY MARY MARY MARY MARY



June 9th, 2017

Hos Brothers Construction 733 West Bostian Road Woodinville, Washington 98072

3

RE: Residential Underground Heating Oil Tank at 1001 Minor Avenue Seattle, Washington 98104

This is to certify that Filco Company, Inc. has pumped, triple rinsed, and filled with cement slurry, one 1,000 gallon underground commercial heating oil tank from the above named property. All work was done, and contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suetens

	OPHITPD LIKE		FRI 6/9/17 @ 11 AM	國001/00
Your Seattle			@ IIAM	-167
Fire Department				
	APPLICATION F	OR TEMPORARY I	PERMIT	
Code 7908	Commercial Tank			
Permit Fee: \$255.00				
TO BE COMPLETED BY PERMIT AP	PLICANT	(s) must be removed fr	Date Issued: 9 om site on the same day as	7=6-9-1
FIRM NAME Filco Compa	ny, Inc.			pernan is issued
MAILING ADDRESS PO Box	31228			
crry Seattle		18/4	SUITE	
JOBSITE ADDRESS 1004 BOT	en Ave	STATE WA	zip 98103	
CONTACT PERSON JOSH HILLO	>n		0.0.0	
Number of Tank(s): One	Tank Size(s): 1000	PHONE NUMBER (206) 423-1092	
Product(s) Previously Contained:			Aboveground tank	
			Underground tank	
 Removal (Marine Chemist insp Abandonment-in-Place (Marine 	Chemint and certificate requi	red for all tanks regardle	ss of size or contents)	
and/or unknowns)	continuate certificate require	ed for tanks previously c	ontaining Class I flammable	liquids
Hot work being conducted:	LZL X1		a hot work permit is required	1
Permit applications may be submitte Seattle Fire Department	ed in person weekdays fro	m 8:00 a.m. to 4:30 m.	in the permit is required	.)
Fire Marshal's Office - Pormit-	To pay	With a Visa or Mactor	C	
440 I hird Aye S. 2nd Floor	THEN C	CALL US TO CONFIRM P	Card: Fax or email this appli RECEIPT AND MAKE PAYME	cation
Seattle, WA 98104-2608	E-mail:	permits@seattle.gov	0/386-1348	
Call 386-1450, at least :	24 hours prior to and	And State State of the state of the	range for an appointment	
TANKS MAY BE REMON	ED/DECOMMISSIONED	ONLY AFTER FIRE D	range for an appointment EPARTMENT INSPECTIO	
				Conception of the local division of the loca
conditions all noted	ve or decommission the tr	mple a stand of the		PERMITI
Special permit conditions: Tenk remov	al/decommissioning must be used	CONDITIONS ARE I	NOT ATTACHED	and local
Special permit conditions: <u>Tank remov</u>	nual be pe	rtormed, or directly supervise	d, by an ICC certified Individual (W	(AC 173-360-800)
FMO USE:		and a second	and the second sec	
Check No.: (1) 19715010	APPROVED I			
Receipt No.: 5-270107	Name of Man	ung Juans	L SFD ID# .[3[])	
Application ID#: 01327 (01/17)	Name of Marine Date: <u>6-</u> 9	e chemist	Certificate # PO	128/041-
74 n x / ł				

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS

- 1. Two (2) portable fire extinguishers each having a minimum rating of 40 BC shall be on site within 50 feet of the operation. Fire extinguishers shall be inspected, approved and certified annually.
- 2. Rope or ribbon barricades located at least 10 feet from the tank shall surround every outdoor storage tank removal or decommissioning operation or the operation shall be enclosed in a fenced yard.
- 3. "No Smoking" signs shall be posted in readily visible locations.
- 4. No hot work is allowed on a tank system prior to issuance of this permit and the tank is certified "Safe for Hot Work" by a Certified Marine Chemist. Hot work means any activities involving riveting, welding, burning, brazing, soldering, heating, chopping, grinding, ripping, drilling, cutting with a chop saw or "Sawzall", abrasive blasting, use of powder-actuated tools or similar spark-producing operations, crushing or mechanically shearing to facilitate opening for cleaning, disposal, scrapping for recycling purposes.
- 5. A separate temporary Seattle Fire Department permit (Code 4913) or a validation number assigned in conjunction with an annual hot work permit (Code 4911 or 4912) is required prior to any hot work operations.
- 6. Permits may cover multiple tanks located at the same address. If additional tanks are to be removed or abandoned at later dates, separate permits shall be obtained. Each address location requires a separate permit application regardless of whether multiple address locations are physically next to one another.
- 7. Additional fees will be charged if inspectors are required to work other than normal business hours. (Normal business hours are Monday through Friday, 8:00 a.m. to 4:30 p.m.)
- 8. No excavation of an underground tank is permitted prior to inspection by the Seattle Fire Marshal's Office. Exception: Removal of the top layer of asphalt or concrete only with no removal of dirt, pea gravel or soil over the underground storage tank. Further excavation may be allowed by a Seattle Fire Department Special Hazards Unit Inspector prior to the initial inspection depending on conditions and if the tank has been inerted by a Marine Chemist who is present on site. The name of the inspector and the time permission was given shall be made available at time of inspection.
- Prior to inspection, to ensure tanks and connected piping are completely free of all flammable or combustible liquids, a
 receipt or certificate must be on site indicating the tanks have been pumped and rinsed by an approved company.
 Product and rinse water must be disposed of in an approved manner.
- 10. For tanks being decommissioned in place that previously contained Class I liquids, a Certified Marine Chemist certificate must be issued and available on site for inspection certifying that the tank has been properly inerted prior to filling.
- 11. No tank shall be filled prior to an inspection by the Seattle Fire Marshal's Office.
- 12. Tanks being decommissioned in place must be filled with a lean concrete mixture. Filling with foam is prohibited.
- 13. A Marine Chemist's certificate verifying the tank has been properly inerted or is otherwise certified "Safe for Hot Work" shall be issued and available on site for inspection for each underground and aboveground tank being removed regardless of the product previously contained.
- 14. If tanks are being removed, the tanks' atmosphere must be inert using one of the following approved methods:
 - Dry ice (pellets or chunks of solid CO₂). Minimum 40 lbs per 1000 gallons of tank capacity is recommended.
 - Compressed CO₂ gas in cylinders (Note: This method may only be performed by a Certified Marine Chemist).
 - Purging with air (gas-freeing) using Venturi tube apparatus, with proper bonding and grounding and after the tank has been pumped and rinsed by an approved company.
- 15. A maximum reading of less than 6% of oxygen must be obtained prior to the removal of the tanks if CO₂ or another inert gas, as approved by the Marine Chemist, is used to inert the tank or, a reading of 0% LEL must be obtained prior to removal of the tank if the air-purging (Venturi air moving devices) method is used.
- 16. All local, state and federal regulations for confined space entry shall be complied with prior to entering an underground storage tank.
- 17. Tanks with baffles to prevent movement of liquid must be certified gas-freed or inerted by a Certified Marine Chemist or a Petroleum Industry Safety Engineer regularly engaged in that business prior to removal.
- 18. Tanks being removed must be removed from the site and relocated to a remote, approved facility on the same day that the permit is issued.
- 19. During the hot work operations, digging, excavating, hauling or transport of petroleum storage tanks that have not been cleaned and gas-freed, tanks must be inerted to less than 6% oxygen. All openings are to be cap closed and secured except for one 1/8" hole drilled through a cap. These tanks are to be sprayed painted with "INERTED, DO NOT ENTER" or "INERTED WITH CO₂, NOT SAFE FOR WORKERS".

FILCO COMPANY INC. PO BOX 31228		In	voice
SEATTLE, WA 98103		DATE	INVOICE #
(206) 547-8347		6/13/2017	37362
BILL TO HOS BROTHERS CONSTRUCTION PO BOX 1788 WOODINVILLE, WA 98072-1788	JOB LOCATION 1001 MINOR AVE SEATTLE, WA 98		

	<u>ا</u>	JOB NUMBER		TERMS			
JTEM		DUE O	ON RECEIPT				
	DESCRIPTION						
R/RQ	FILL 1,000 GALLON OIL TANK WITH CEME	NT SLURRY		4,500.00			
	SUBTOTAL OF CHARGES			4,500.00			
RESALE	5						
CERTIFIC		Subtotal		\$4,500.00			
	CATE OF DECOMMISSIONING AND	Subtotal Sales Tax	(10.1%)	\$4,500.00 \$0.00			
PERMIT	CATE OF DECOMMISSIONING AND (IF APPLICABLE) WILL BE SENT ON RECEIPT OF PAYMENT.		(10.1%)				
PERMIT UP	(IF APPLICABLE) WILL BE SENT	Sales Tax		\$0.00			





F	Requested Disposal Facility: 4178	B Roosevelt Regional MSW LF WA		Was	te Profile #				
	Saveable fill-in form Restricted parting until all requi	red freilaud Salds are considered							
	I. Generator Information Sales Rep #								
ſ	Generator Name: NASH-Holla	nd 1001 Minor Investors, LLC.							
	Generator Site Address: 1001 M								
	City: Seattle	County: King	State:	WA	Zip: 98104				
-	State ID/Reg No:	State Approval/Waste Code:		(if applicable)	NAICS #:				
-	Generator Mailing Address (if dif	ferent): 1000 Dexter Ave N., Suite	201						
	City: Seattle	County: King	State:	WA	Zip: 98109				
2	Generator Contact Name: Tom	Parsons		Email: Tparsons	@hollandpartnergroup.com				
-	Phone Number: 206.430.5974	Ext:	Fax Nu	mber;					
1	I. Billing Information			······································	<u></u>				
-		astrution Inc	Contact	Name: David	Martin				
£ -	Billing Address: 80, Box	1758 back	Contac						
	City: Wood inville	State: 1./A	Zip: 49		425-481-5569				
L.,					165-181-7567				
	il. Waste Stream Informa	tion							
	Name of Waste: Petroleum Con								
	Process Generating Waste:								
100		ne removal of heating oil undergrou	nd ctorn	an tooko /I ICT					
	our ofference asjacent daning th	ie removal of heating on andergrou	nu siora	ge taliks (001)					
	Type of Waste:	INDUSTRIAL PROCESS WASTE		LLUTION CONTRO	WASTE				
	Physical State:		WDER						
	Method of Shipment:			HER: Truck & Pup					
	Estimated Annual Volume: 25								
ŕ	Frequency:								
	Disposal Consideration:		Пв	OREMEDIATION					
	<u> </u>								
I	V. Representative Sample	• Certification		IPLE TAKEN					
Γ	is the representative sample colle	ected to prepare this profile and lab	oratory a	analysis	YES or NO				
	collected in accordance with U.S.	EPA 40 CFR 261.20(c) guidelines	or equiv	alent rules?					
	Type of Sample: COMPOSITI	SAMPLE GRAB SAMPLE							
	Sample Date: May 15. 2017								
	Sample ID Numbers: CT- Stockpil	e							
	1.1								





Page 2 of 2

			Was	ste Profile	e#			
V. Physica								
	I Characteristics of	Waste					6. CEA	
Characteristic Components % by Weight (range 1. Soil (silty sand to sand with some gravel) 39.5								
2. Heavy oil-rang		9	39.5 <u.5< td=""><td></td><td></td><td></td><td></td></u.5<>					
3.			-0.0					
4.							_	
5.								
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	F	lash Point	C.	
Brown	Slight Petroleum	YES or NO	100	7 - 8	>	140 o _p		
Attach La	boratory Analytical Re Re	port (and/or Material Safety Data quired Parameters Provided for t	Sheet) Includii this Profile	ng Chain	of Custo	dy and		
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?								
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ypm)[reference 40 CFR 261.23(a)(5)]?								
Does this waste of Part 761?	contain regulated concentra	tions of Polychlorinated Biphenyls (PC	Bs) as defined in	40 CFR	Yes	or 🕢No		
Does this waste of including RCRA	contain concentrations of lis Listed Solvents?	ted hazardous wastes defined in 40 C	FR 261.31, 261.32	2, 261.33,	Yes	or 🗸 No		
Does this waste e	xhibit a Hazardous Charac	teristic as defined by Federal and/or S	tate regulations?		Yes	or 🗸 No	٦	
Does this waste of other dioxin as de), or any	Yes or No						
Is this a regulated	Yes	or 🗸 No	٦					
Is this a regulated		Yes	or 🔽 No					
Is this waste a rea	active or heat generating w	aste?			Yes	or 🖉 No		
Does the waste c	ontain sulfur or sulfur by-pr	oducts?			Yes	or 🔽 No		
Is this waste gene	erated at a Federal Superfu	nd Clean Up Site?			Yes	or 🗸 No		
Is this waste from	a TSD facility, TSD like fac	cility or consolidator?			Yes	or 🗸 No		

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not gittered the form or content of this profile sheet as provided by Republic Services Inc.

Holland Partner Group Authorized Representative Name And vpe or Print) Company Name 5/23/2017 Authorized Representative Signature Date

HOS BROS. CONSTRUCTION, INC. 369414 7733 W. Bostian Road • P.D. Box 1788 • Woodinville, WA 98072-1788 (425) 481.5569 Fax (425) 485.6634

Date: $6 - 7 - 2017$ S M T W TH F S
Start 6 30 (AM PM W
Finished 4:25 AM(PM)
1/2 Hour lunch Yes Not
Driver's Time
Equip. Time

TEAMSTER TIME TICKET	
Bruce Treel	 Emp.#
Truck No	Trailer No. 2035
During the time period covered on this time card,	I (check one)
Experience a job-related injury	Signature
Remarks	

		Please	e print firmly - 5 p	part form				
Start/ Load Time	Truck Size	Description/Materials Hauled	Materials Loaded From	Materials Delivered To	Time Unloaded		Office Us	e
6:30		Travel	1896	(1899)	7:00			
7:00	BALL	X port ((89)	1896	737	:37	.62	
820		XPORT 1	(895)	1862	906			
953		2			1045			
1128		3	<u></u>		12:13			
1200			- and the second second second	$\sim \sim \log \sqrt{1-1}$	130			
205	8A14	Xpont	1895	390	3:05			
305	SANE	P. + RUN	390	1896	425			
					·			
			6:30					
			x '					
								0
								3.2

HOS BROS. CONSTRUCTION, INC. 379762

	TEAMSTER TIME TICKET
Date: 6-16-17 S M T W TH F S	Driver's Name (Please print) Driver's Name (Please print) Z006
Start 7:20 AN PM AL	Truck No. 5064 Trailer No. 5064
Finished 12:50 AM PM	During the time period covered on this time card, I (check one)
1/2 Hour lunch Yes 🗖 No 🖓	Experience a job-related injury
Driver's Time	Signature
	Remarks31766
Equip. Time	371.27

Start/Load Truck Description/Materials Hauled Materials Materials Diluseed To Time Office Use 7:20 BANE TBANEZ 399 1899 8.2.1	1
8:25 ·· ERPORT 1899 BDZ 9:17 	-
0:10 18773 DD2 9.11 10:16 188685 1899 1896 18:44 10:16 1899 1896 18:44 10:16 1899 1896 18:44 10:16 1899 1896 18:44 10:14 1899 1896 18:44 10:14 1899 1896 18:50 16:44 11:50 TRAVEL 1896 399 12:50 16:44	
10:16 N ERROLT 0899 1896 10:44 10:44 N ERROLT Contaminated 1899 ReGIONAL 11'50 RESTONAL 11:50 N TRAVEL 1896 399 12:50 Hos Yave 4:5 HES 160 802 120 1896	
10:44 N EXPORT contaminated (1899) ReGIONAL 11:50 RESTANT 11:50 N TOLAVEL 1896 399 (12:50 Has Yave 1896 BDZ 4:5 HES 160 8DZ	
10:44 · ERPORT contaminated (1899) RegionAL 11:50 · RESPONDE 11:50 · TRAVEL 1896 399 / 12:50 Hos Yan 	WAS
11:50 TRAVEL 1896 399 12:50 Hos Yavi 	
#.5 HE5 ILD 8DZ John ILD 1896 I	1.
#.5 HES ILD 8DZ ILD ILD 1896 I I	
110 1896	
	4
ILD CONTAMINATED TO BEGIONAL DISPOSAL	1
EEGIDNAL DISPOSAL	
e mener	

OFFICE COPY

HOS BROS. CONSTRUCTION, INC. 379763

TEAMSTER TIME TICKET 2006 Emp.# Driver's Name (Please print) 9 6 Date: TH S F W S M 2 Truck No. 5064 Trailer No. PM Star During the time period covered on this time card, I (check one) 0 AM PM Finished Yes Q No 🗖 Experience a job-related injury 1/2 Hour lunch Signature Driver's Time Remarks Equip. Time

		Please	print firmly - 5 p	art form				
Start/ Load - Time	Truck Size	Description/Materials Hauled	Materials Loaded From	Materials Delivered To	Time Unloaded		Office Use	-
6'30	SAXIE	PRETRIP	6	1899	6:38			
1:38	11	ERPORT Conservated	(899)	Report	7:33			
9:28	N	7"screenings	399	YASS?	9:13	8		
9:14	11	ERPORT STRIPPINGS	1904	TOPSAils	9:48			
9:49	5	3WAY TOPSOI	TOPSOILS	1805	10:17			2 - P.
10:31	1	EXRORT STRIPPINGS (1904	Topspils	11:13			
11:14	11	3WAY TOPSO,1	PROFIL	1905	12:14		-	
12:31	1	ERRORT STRIPPINGS	(B04).	TOPSO; K	1:07			
1:07	11	3 WAI TOPSOIL -	PACIFIC DOPSOIDS	1805	1:37			
1:52	"	ERBORT STRIPPINGS	0964	PACIFIC TOPSOILS	2:33			
2:34	~~	3 way Tolsoil -	PACIFIC TOPSDILS	1805	3:07			
4:04	1	Pheload I"scheenings	399		4:11			
4:11		POSTTRIP		3991	4:20			
		EXPORT CONTAMINATED	1.05 HBS.	16	CONTAM	INATET	>.	
		le de la companya de						
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$\overline{}$		3		at the second se				

OFFICE COPY

All Ticket Types

History and Waiting

* - Confirmed Qty Applied to Billing

LW-8216

	Facility & cket Number	Customer	Truck	Material	Contract Rate	Billing Quantity	Ordered Quantity	Minimum Quantity	Maximum Quantity	Material Total	Tax Total	Total
06/19/2017 I 01	951444	011255 - Hos Brothers	5064 HOS	SW-CONT SOIL W/FUE	45.00 F	29.85 TN	0.00	\$0.00	\$0.00	\$1,343.25	\$0.00	\$1,343.25
06/19/2017 I 01	951451	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	26.93 TN	0.00	\$0.00	\$0.00	\$1,211.85	\$0.00	\$1,211.85
06/19/2017 I 01	951452	011255 - Hos Brothers	6082 HOS	SW-CONT SOIL W/FUE	45.00 F	27.12 TN	0.00	\$0.00	\$0.00	\$1,220.40	\$0.00	\$1,220.40
06/19/2017 I 01	951453	011255 - Hos Brothers	1838 HOS	SW-CONT SOIL W/FUE	45.00 F	27.63 TN	0.00	\$0.00	\$0.00	\$1,243.35	\$0.00	\$1,243.35
06/19/2017 I 01	951454	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	34.05 TN	0.00	\$0.00	\$0.00	\$1,532.25	\$0.00	\$1,532.25
06/19/2017 I 01	951455	011255 - Hos Brothers	6082 HOS	SW-CONT SOIL W/FUE	45.00 F	33.14 TN	0.00	\$0.00	\$0.00	\$1,491.30	\$0.00	\$1,491.30
06/19/2017 I 01	951456	011255 - Hos Brothers	1838 HOS	SW-CONT SOIL W/FUE	45.00 F	33.46 TN	0.00	\$0.00	\$0.00	\$1,505.70	\$0.00	\$1,505.70
06/19/2017 I 01	951457	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	30.91 TN	0.00	\$0.00	\$0.00	\$1,390.95	\$0.00	\$1,390.95
06/28/2017 I 01	951804	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	28.67 TN	0.00	\$0.00	\$0.00	\$1,290.15	\$0.00	\$1,290.15
06/28/2017 I 01	951811	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	31.77 TN	0.00	\$0.00	\$0.00	\$1,429.65	\$0.00	\$1,429.65
06/28/2017 I 01	951817	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	28.73 TN	0.00	\$0.00	\$0.00	\$1,292.85	\$0.00	\$1,292.85
06/28/2017 I 01	951822	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	28.86 TN	0.00	\$0.00	\$0.00	\$1,298.70	\$0.00	\$1,298.70
06/28/2017 I 01	951829	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	29.66 TN	0.00	\$0.00	\$0.00	\$1,334.70	\$0.00	\$1,334.70
06/28/2017 I 01	951833	011255 - Hos Brothers	1830 HOS	SW-CONT SOIL W/FUE	45.00 F	32.54 TN	0.00	\$0.00	\$0.00	\$1,464.30	\$0.00	\$1,464.30
06/29/2017 I 01	951841	011255 - Hos Brothers	5034 HOS	SW-CONT SOIL W/FUE	45.00 F	28.09 TN	0.00	\$0.00	\$0.00	\$1,264.05	\$0.00	\$1,264.05
06/29/2017 I 01	951842	011255 - Hos Brothers	6080 HOS	SW-CONT SOIL W/FUE	45.00 F	28.78 TN	0.00	\$0.00	\$0.00	\$1,295.10	\$0.00	\$1,295.10
06/29/2017 I 01	951843	011255 - Hos Brothers	5001 HOS	SW-CONT SOIL W/FUE	45.00 F	29.49 TN	0.00	\$0.00	\$0.00	\$1,327.05	\$0.00	\$1,327.05
07/10/2017 I 01	952186	011255 - Hos Brothers	5063 HOS	SW-CONT SOIL W/FUE	45.00 F	27.51 TN	0.00	\$0.00	\$0.00	\$1,237.95	\$0.00	\$1,237.95
07/14/2017 I 01	952374	011255 - Hos Brothers	5007 HOS	SW-CONT SOIL W/FUE	45.00 F	27.49 TN	0.00	\$0.00	\$0.00	\$1,237.05	\$0.00	\$1,237.05
07/14/2017 I 01	952381	011255 - Hos Brothers	1821 HOS	SW-CONT SOIL W/FUE	45.00 F	27.09 TN	0.00	\$0.00	\$0.00	\$1,219.05	\$0.00	\$1,219.05
07/14/2017 I 01	952383	011255 - Hos Brothers	1817 HOS	SW-CONT SOIL W/FUE	45.00 F	26.53 TN	0.00	\$0.00	\$0.00	\$1,193.85	\$0.00	\$1,193.85
07/14/2017 I 01	952384	011255 - Hos Brothers	5062 HOS	SW-CONT SOIL W/FUE	45.00 F	28.72 TN	0.00	\$0.00	\$0.00	\$1,292.40	\$0.00	\$1,292.40
07/14/2017 I 01	952385	011255 - Hos Brothers	5061 HOS	SW-CONT SOIL W/FUE	45.00 F	28.52 TN	0.00	\$0.00	\$0.00	\$1,283.40	\$0.00	\$1,283.40
07/14/2017 I 01	952386	011255 - Hos Brothers	5008 HOS	SW-CONT SOIL W/FUE	45.00 F	30.59 TN	0.00	\$0.00	\$0.00	\$1,376.55	\$0.00	\$1,376.55
07/14/2017 I 01	952387	011255 - Hos Brothers	5007 HOS	SW-CONT SOIL W/FUE	45.00 F	30.15 TN	0.00	\$0.00	\$0.00	\$1,356.75	\$0.00	\$1,356.75
07/14/2017 I 01	952389	011255 - Hos Brothers	1503 HOS	SW-CONT SOIL W/FUE	45.00 F	28.78 TN	0.00	\$0.00	\$0.00	\$1,295.10	\$0.00	\$1,295.10
07/14/2017 I 01	952390	011255 - Hos Brothers	1815 HOS	SW-CONT SOIL W/FUE	45.00 F	27.12 TN	0.00	\$0.00	\$0.00	\$1,220.40	\$0.00	\$1,220.40
07/14/2017 I 01	952391	011255 - Hos Brothers	6087 HOS	SW-CONT SOIL W/FUE	45.00 F	30.37 TN	0.00	\$0.00	\$0.00	\$1,366.65	\$0.00	\$1,366.65
07/14/2017 I 01	952392	011255 - Hos Brothers	6082 HOS	SW-CONT SOIL W/FUE	45.00 F	29.98 TN	0.00	\$0.00	\$0.00	\$1,349.10	\$0.00	\$1,349.10
Tickets Reported:	29	Items Reported:	29					Contract	Totals:	\$38,363.85	\$0.00	\$38,363.85

All Ticket Types

Detail Contract Activity Report December 01, 2016 to November 13, 2017

December 01, 2016 to November 13, 2 Specific Contract(s) : 'LW-8216'

History and Waiting * - Confirmed Qty Applied to Billing

Material Summary VH - SW-CONT SOIL W/FUEL		Weight Inbound Outbound		Volume Inbound Outbound		Count Inbound Outbound		Billing Quantity	Material Total	Tax Total	Total		
			852.53	0.00 TN	0.00	0 0.00 YD	0.00	0.00	852.53 TN	\$38,363.85	\$0.00	\$38,	\$38,363.85
									Cash Tota	ls: \$0	.00	\$0.00	\$0.00
Tickets Reported:	29	Items Reported:	:	29					Invoice Tota Report Tota	400,000		\$0.00 \$0.00	\$38,363.85 \$38,363.85