



Interim Action and Well Installation Report

Former Unocal Bulk Fuel Plant 0766
Phillips 66 Site 977
511 E Lincoln Avenue
Sunnyside, Washington
Facility Site ID: 539
VCP Site ID: CE0467

Phillips 66 Company

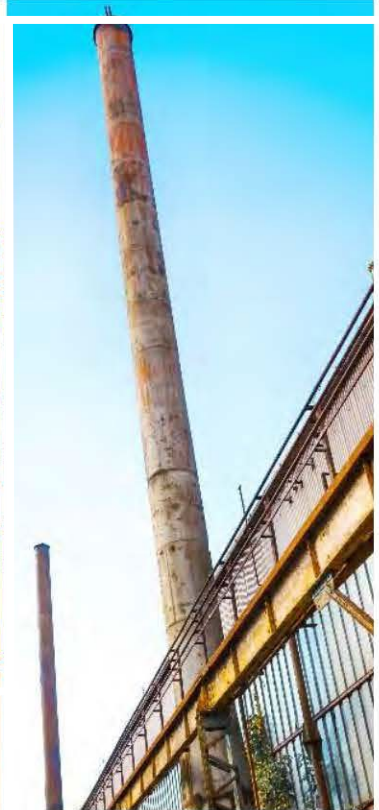




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1. Introduction

GHD is submitting this *Interim Action Report* (IAR) for the former Unocal bulk fuel terminal on behalf of Phillips 66 Company (P66). The scope of work was completed in accordance with the *Interim Action Work Plan* dated May 16, 2018 (Work Plan) for the property located at 511 East Lincoln Avenue, Sunnyside, Yakima County, Washington (Property, Figure 1). The purpose of the remedial excavation and post excavation monitoring was to excavate and remove the source mass associated with the former heating oil underground storage tank (UST) and to collect post-excavation groundwater data. This IAR summarizes the findings of the remedial excavation activities that were completed on September 4, 2018 and October 1 through 23, 2018 and the installation of monitoring wells and soil boring on April 2 through 4, 2019.

2. Site Description and Background

The Property is a former bulk fuel terminal, which includes an office building with attached warehouse in the northern portion of the property, and above ground storage tanks (ASTs) and a loading rack to the south (Figure 2). The ASTs and loading rack have been decommissioned and are no longer use, although still in place at the Property. The Property is bounded to the north by East Lincoln Avenue and a school district property, to the east by multi-family residential building, to the west by railroad tracks, and residential properties to the south (Figure 3). For the purpose of this IAR, the Site is considered any portion of the Property that has historically been impacted by the release including any adjacent properties (e.g., soil, groundwater, vapor). A summary of previous investigations and remedial activities is included as Appendix A. A Site Plan is included as Figure 2.

The Site is located in Yakima County (Yakima County Tax Parcel Number 221025-33524). Surface elevation of the Site is approximately 445 feet above mean sea level (amsl).

The Site is located within the eastern foothills of the Cascade mountain range. The Snipes Mountain wasteway is the primary local drainage, located approximately 250 feet west of the Site. According to the Washington State Department of Natural Resources, the Site and immediate area surrounding consists of quaternary alluvium consisting of unconsolidated to semi-consolidated alluvial clay, silt, sand, gravel, and/or cobbles. The alluvium is underlain by Pleistocene outburst flood deposits consisting of gravel and sandy gravel deposits with interbedded silt lenses.

Based on historical environmental investigations and the most recent soil investigation, soils beneath the Site are described as silty sand with intermittent clayey sand from the ground surface to approximately 20 feet below ground (fbg); the maximum depth explored. Groundwater was encountered at approximately 9 to 12 fbg during remedial excavation and post groundwater monitoring activities. Soil borings and well construction details are included in Appendix B.



3. Remedial Excavation

3.1 Utilities

Prior to field activities, GHD notified the Washington State One Call Utility Notification Service more than 48 hours prior to field activities to clear the soil boring locations with public utility companies. GHD also contracted Underground Locating Services (ULS) to conduct a private utility survey to further identify potential subsurface utilities and underground obstructions in the vicinity of the proposed remedial excavation. An electrical line and a water line identified transecting the proposed area of excavation that services the building was temporarily taken out of service and removed for excavation activities.

3.2 Remedial Excavation

On October 2 through 16, 2018, GHD oversaw remedial excavation activities immediately east of the office building in the northeast portion of the Property. The excavation was advanced by ClearCreek Contractors (Clearcreek) of Marysville, Washington. Prior to the excavation, Clearcreek disconnected the current above ground heating oil tank located on the eastern side of the office building and temporarily relocated the tank to another part of the Property during excavation activities. The excavation was completed to an approximate depth of 14 to 15 fbg, the maximum extent practical following industry safety standards and available equipment/engineered slope controls. Trench boxes and shoring were utilized along the western excavation boundary due to the presence of the office building. Along the northern portion of the excavation, perpendicular slot cuts were utilized to advance the excavation to the northern extents without compromising the adjacent sidewalk. Once the slot cuts were complete and samples collected, the northern portion was sloped at an approximate 1.5:1 ratio. The excavation extended from the eastern edge of the office building to the east approximately 30 to 34 feet, and from the northern property boundary to the south approximately 57 feet. Remedial excavation extents are presented on Figure 2 and Figure 4.

Within the excavation, variable amounts of sand and silt were observed underlying approximately 1 foot of fill material consisting of sandy gravel with cobbles and silt. Pea gravel was also observed in the former heating oil UST excavation area completed in 1989 by GeoEngineers. Petroleum contaminated soil (PCS) was segregated and stockpiled on Property and covered with plastic pending characterization for disposal. Groundwater was observed during excavation activities at approximately 12 fbg. Groundwater that was generated during the dewatering process was stored in a 20,000-gallon frac tank for future disposal. Waste disposal details are described further in section 3.2.5.

3.2.1 Well Abandonment

As part of the remedial excavation activities, monitoring well MW-3A was destroyed. Prior to the commencement of work, a notice of intent to decommission the well was submitted to the Washington State Department of Ecology (Ecology) by a Washington State professional engineer (Appendix C).



3.2.2 Compliance Soil Sampling & Results

Performance soil samples were collected at selected depths based on visual observations and field screening utilizing a photoionization detector (PID) to evaluate whether further remedial excavation was necessary. Soil sample collected from the interior of the excavation exhibited PID readings that ranged from 35 parts per million (ppm) to 2,000 ppm. PCS identified by field screening and inferred clean soil was segregated in separate stockpiles for disposal. Prior to disposal, composite soil samples were collected for laboratory analysis for profiling purposes.

At the completion of the remedial excavation activities a total of 15 confirmation soil samples were collected from the base and sidewalls of the excavation. In addition, one soil sample was collected from the interior of the excavation where soil impacts were observed for the purpose of collecting additional analyses of the impacted soil for calculation of a Site-specific MTCA Method B cleanup levels, if applicable for future use. Performance and confirmation soil sample locations are depicted on the Soil Investigation Map as Figure 4.

Soil samples were collected using hand tools from the excavator bucket. All non-dedicated sampling equipment was decontaminated prior to and between each sample collection. Soil samples were immediately placed on ice and shipped to Pace National Laboratory (Pace) in Mount Juliet, Tennessee under strict chain of custody procedures. The soil samples were analyzed for the following constituents:

- TPHg, TPHd, and TPHo by NWTPH-Gx/Dx; and
- BTEX by EPA Method 8260B

Select soil samples based on field observations were additionally analyzed for:

- Methyl tertiary-butyl ether (MTBE), n-Hexane by EPA Method 8260B;
- Polychlorinated biphenyls by EPA Method 8082A;
- Semi Volatile Organic Compounds (SVOCs) by EPA Method 8270D by Select Ion Monitoring (SIM); and/or
- Extractable petroleum hydrocarbons (EPH)/volatile petroleum hydrocarbons (VPH) by Ecology Method EPH/VPH

Concentrations of TPHg and/or TPHd exceeding their respective MTCA Method A cleanup levels were identified in the following five soil samples collected from the excavation extents:

- Location 6 – Northeast corner at 10 fbg. Further excavation to the north was limited by the adjacent sidewalk and Property extent.
- Location 8 – Bottom center of the excavation at 15 fbg. Further excavation at location 8 was limited by the excavator reach and the presence of groundwater.
- Location 24 – Bottom southern center of the excavation at 14 fbg. Further excavation at location 24 was limited by the excavator reach and the presence of groundwater.
- Location 22 – Southwest sidewall at 7 fbg. Further exaction to the southwest was limited by the office building.



- Location TB-2 – Western center sidewall and bottom at 14 fbg. Further excavation to the west was limited by the office building.

Reported concentrations of TPHg above the MTCA Method A cleanup level of 30 mg/kg, ranged from 160 mg/kg at the sample 6 location to 3,850 mg/kg at the sample 22 location within the southwest sidewall at approximately 7 fbg. Other sample locations with TPHg concentrations above the screening level were reported in samples 8, 24, and TB2, all of which were collected from the base of the excavation. The presence of TPHg is likely due to the degraded heating oil and overlap of gasoline range organics in the NWTPHDx analysis. There is no evidence or potential source for a gasoline release in this area of the Site.

Reported concentrations of TPHd above the MTCA Method A cleanup level of 2,000 mg/kg, were reported in soil samples 8 and 22 at 2,620 mg/kg and 18,200 mg/kg, respectively.

The remaining soil samples collected from the remedial excavation extents were either below laboratory reporting limits and/or their respective MTCA Method A cleanup level. A summary of soil analytical results from the excavation as well as previous investigations is presented on Table 1. Laboratory reports are included in Appendix D. Soil sampling locations are presented on Figure 4.

3.2.3 Oxygen Release Compound (ORC) application, Excavation Backfill & Site Restoration

At the completion of remedial excavation activities approximately 120 pounds of Oxygen Release Compound (ORC) ® was applied to the base of the excavation. The excavation was then backfilled with 4 to 8-inch quarry spalls until backfilled above the water table. Approximately 1,300 square feet of geotextile fabric was placed on top of the quarry spalls followed by a mix imported pit-run and native clean soil removed during the excavation. Backfill and compaction was completed in 1-foot lifts. Compaction was down with a backhoe mounted plate compactor and roller. Materials Testing & Inspection (MTI) of Zillah, Washington completed density compaction testing on the uppermost lift of soil immediately east of the onsite office building. Each of the compaction tests passed with 95% or greater compaction. The soil compaction test results are included in Appendix E. The excavation backfill was completed with 6-inches of crushed gravel to match the existing grade. In tangent with the backfilling operations, SHJ of SeaTac, Washington installed a new electrical meter on the service pole near the eastern property boundary and installed service leads from the new meter to the existing distribution panel on the east side of the office building. The electrical meter and connection were subsequently inspected by the City of Sunnyside building department and Pacific Power prior to reconnection. Additionally, Clearcreek reinstalled the subsurface water line and the above ground heating oil tank located on the eastern side of the office building. The fence along the northern property boundary was restored also re-installed.

3.2.4 Waste Disposal

A total of 901 tons of impacted soil was excavated and transported by Clearcreek to Republic Services Roosevelt Regional Landfill in Roosevelt, WA. Additionally, a total of 8,138 gallons of groundwater generated from dewatering the remedial excavation was transported for disposal by NRC Environmental Services to the Stericycle water treatment facility in Kent, Washington. All waste disposal documentation including weight tickets, profiles and final manifests are included in Appendix F.



4. Summary of Post Excavation Assessment Activities

Subsequent to remedial excavation activities, GHD advanced one soil boring (B-12) and installed five monitoring wells (MW-9 through MW-13) to evaluate the post remedial excavation groundwater conditions and further evaluate the remaining left in place soil impacts at the remedial excavation extents and to define the impacted soil and groundwater extents.

Prior to field activities, GHD notified the Washington State One Call Utility Notification Service more than 48 hours prior to field activities to clear the soil boring locations with public utility companies. GHD also contracted Underground Locating Services (ULS) to conduct a private utility survey to further identify potential subsurface utilities and underground obstructions in the vicinity of the proposed boring locations. Soil boring locations were cleared to 5 feet below grade (fbg) using an air knife and vacuum truck to ensure no unidentified underground utilities or obstructions were located beneath the ground surface.

4.1 Monitoring Well Installation

On April 3 and 4, 2019 Holt Services, Inc. (Holt) of Edgewood, Washington, installed five monitoring wells (MW-9 through MW-13) under the supervision of GHD field personnel. Borings for the monitoring wells were advanced to depths ranging from 19 to 20 fbg. The monitoring well locations are presented on Figure 5.

Soil borings were advanced from 0 to 5 fbg via vacuum truck/air knife, and 5 fbg to termination depth using direct push truck mounted drill rig. Soil encountered in each boring during drilling activities was logged in accordance with American Society for Testing and Materials' (ASTM) Unified Soil Classification System (USCS) standard D2488 by experienced environmental personnel. Soil samples were screened continuously from the soil cores for volatile organic compounds (VOCs) using a photoionization detector (PID) as well as visual observation. Water was encountered at approximately 9 feet while drilling.

The monitoring wells were constructed with 15 feet of 2 inch Schedule 40, polyvinyl chloride (PVC), 0.010 inch slot screen, flush threaded with PVC blank well casing from the top of the screen to the top of the well. The wells were installed as a pre-packed wells with the annulus backfilled with a 2/16 Monterey sand pack to a minimum of 1 foot above the top of the screen and sealed with a minimum of 1 foot of hydrated bentonite chips above the filter pack then filled with hydrated bentonite chips. The wells were completed with a flush mount, traffic rated well box.

At the completion of groundwater monitoring well installation activities the monitoring wells were developed by Holt. Approximately 20 gallons of water were purged from each well. Boring logs with lithologic descriptions and PID readings are provided in Appendix B.

4.1.1 Professional Survey

On May 6, 2019 Statewide Land Surveying, Inc. of Gresham, Oregon professionally surveyed the location and elevation of monitoring wells (top of casing and top of monument), boring locations, and site features. Survey results are included as Appendix G.



4.1.2 Investigation Derived Waste (IDW)

Investigation derived waste including soil cuttings and decontamination water was placed in 20-gallon steel drums and labeled as pending analysis. A total of one 20-gallon drum of soil cuttings and two 20-gallon drums of decontamination and purge cleaning water were transported to Waste Management by DH Environmental, Inc. Waste disposal documentation is included in Appendix F. Final manifest and waste documentation will be provided by DH Environmental when available.

4.2 Soil Sampling & Results

Soil samples were collected for laboratory analysis based on field screening and/or at the bottom of each borehole. Soil samples were immediately placed on ice and shipped to Pace Analytical Services, LLC in Minneapolis, Minnesota (Pace) under chain of custody. A total of 12 soil samples were analyzed for TPHg by NWTPH-Gx; TPHd and TPHo by NWTPH-Dx; and BTEX by EPA Method 8260B.

Concentrations of TPHg, TPHd, TPHo, and BTEX were not reported above laboratory reporting limits and/or MTCA Method A cleanup levels with the exception of one soil sample collected from MW-10 at approximately 11 fbg. Sample MW-10-11 had a TPHg concentration of 221 mg/kg, exceeding the MTCA Method A cleanup level of 100 mg/kg. Monitoring well MW-10 was advanced in the vicinity of former MW-3/3A and the former waste oil tank. Residual soil impacts (sample location 8 at 15 fbg) were left in place at the base of the excavation as described in Section 3.2 above. The soil impacts at 10 fbg are likely due to residual impacts in groundwater, not soil since the excavation was backfilled with clean soil down to 15 fbg.

Soil analytical results are presented on Table 1. A Current Soil Conditions Map is included as Figure 5. The laboratory analytical report is presented in Appendix D.

4.3 Second Quarter 2019 Groundwater Monitoring

On May 2, 2019, Blaine Tech Services (BTS), of Auburn, Washington performed groundwater monitoring activities for each of the newly installed monitoring wells MW-9 through MW-13. Depth to water measurements were collected from each well with an electric interface probe. Depth to water in each of the wells ranged from 9.0 to 9.94 feet below top of casing with a groundwater flow direction to southeast at a gradient of 0.002 feet per foot. Light non-aqueous phase liquid (LNAPL) was not detected in any of the wells. Groundwater elevation data is presented in Table 2.

Groundwater elevation contours are presented on Figure 7. Groundwater samples were collected using low flow sampling procedures and were placed immediately on ice and transported to Pace under chain of custody. Groundwater samples were analyzed for TPHg by NWTPH-Gx; TPHd and TPHo by NWTPH-Dx; and BTEX by EPA Method 8260B.

Laboratory analytical results indicated detections of TPHd and/or TPHo in samples from monitoring wells MW-10 and MW-11 at concentrations of 4,185 micrograms per liter (ug/L) and 1,830 ug/L, respectively, exceeding the MTCA Method A cleanup level of 500 ug/L. Monitoring well MW-10 is located within the central portion of the remedial excavation where soil impacts were left in place at the base of the excavation and MW-11 is located immediately down gradient of the remedial excavation.



Based on the groundwater analytical results, it appears that residual groundwater impacts are still present near the former heating oil UST. However, concentrations have significantly decreased from pre-excavation concentrations indicating the remedial excavation and ORC application was successful in reducing impacts at the Site. Laboratory analytical results for the groundwater samples collected from peripheral monitoring wells (MW-9, MW-12, and MW-13) indicate impacted groundwater has been laterally delineated. Residual groundwater impacts previously measured at former monitoring well MW-7 may still be present under the Site building and currently inaccessible. Former down-gradient well MW-6 had been clean for four consecutive quarters prior to decommissioning indicating groundwater impacts under the building are not migrating. Continued quarterly groundwater monitoring will be completed to evaluate concentration trends.

5. Conclusions and Recommendations

GHD oversaw the remedial excavation of impacted soil in the vicinity of the former heating oil UST resulting in the following:

- The excavation of an area approximately 57 feet by 34 feet and advanced to an approximate depth of 14 to 15 fbg.
- A total of 901 tons of impacted soil was excavated and hauled offsite for disposal.
- Confirmation soil sampling from the excavation extents identified concentrations of TPHg and TPHd above the MTCA Method A cleanup levels along the west, southwest, and northeast excavation sidewalls, and at the base of the excavation.
- Prior to backfilling the excavation GHD oversaw the application of ORC to enhance bioremediation of the remaining residual impacts. Soil borings advanced during subsequent assessment activities indicate soil impacts in the northeast and southwest corners have attenuated.

Subsequent to the remedial excavation activities, GHD oversaw the advancement of one soil boring and installation of five groundwater monitoring wells resulting in the following:

- Soil concentrations greater than MTCA Method A cleanup levels for petroleum constituents were identified in MW-10, located within the interior of the remedial excavation extents.
- Soil boring B-12 was advanced to delineate soil impacts identified at excavation northeastern sidewall sample 6. Laboratory results of soil sampled collected from B-12 did not report concentrations above reporting limits, therefore the left in-place soil impacts at the sample 6 location appear to be delineated to the north.
- Groundwater analytical results from monitoring wells MW-10 and MW-11 indicated residual groundwater impacts are still present but at significantly lower concentrations than pre-excavation groundwater impacts.
- Analytical results from the monitoring wells surrounding the source area did not indicate concentrations above MTCA Method A cleanup levels, therefore, groundwater impacts have been delineated with the possible exception of the area beneath the onsite office building, which is inaccessible. Based on historical groundwater analytical results from previous monitoring wells



MW-2 and MW-6, the extent of potential groundwater impacts under the onsite building is limited.

Delineation of groundwater impacts will be confirmed after two consecutive quarters of non-detect data or four quarters of data below MTCA Method A cleanup levels has been achieved.

The results of the remedial excavation and subsequent investigation indicate soil impacts are still in place in the center of the excavation at sample location 8 and along the western sidewall at sample location TB2-W. Due to the limits of the excavation equipment and adjacent building, these impacts could not be over-excavated. The removal of the bulk of the source mass and application of ORC will aid in attenuation of the remaining impacts. Soil impacts have been delineated in all directions with the exception of soil impacts present under the onsite building.

GHD recommends continuing groundwater monitoring of the Site wells to verify the extent of groundwater impacts and evaluate concentration trends in groundwater. GHD will evaluate use of other remedial alternatives to treat the remaining residual impacts as well as the possible use of a model remedy and environmental covenant.

All of Which is Respectfully Submitted,

GHD

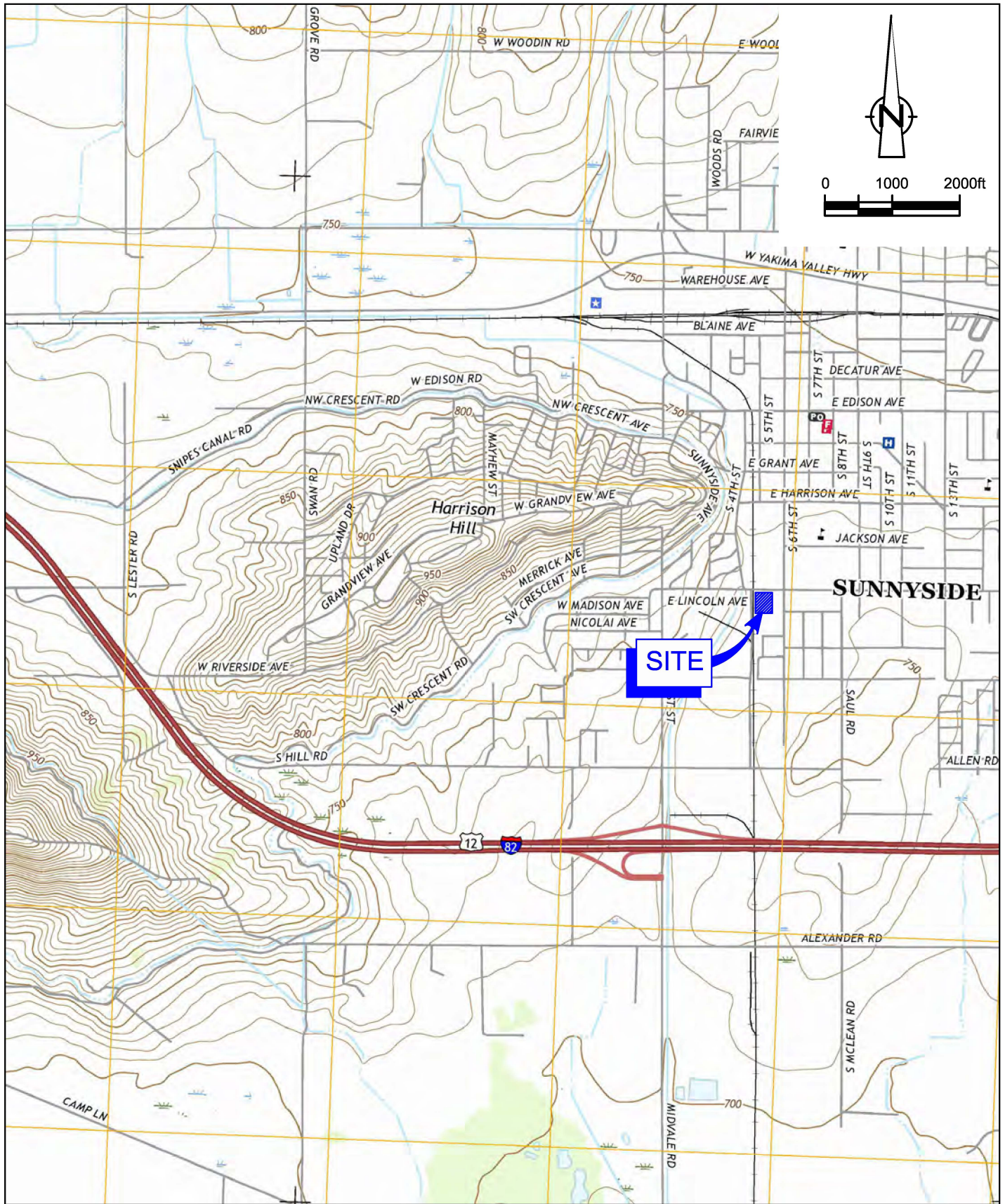
A handwritten signature in black ink that reads "Matthew Davis". The signature is written in a cursive, flowing style.

Matthew Davis, LG

A handwritten signature in black ink that reads "Heather Gadwa". The signature is written in a cursive, flowing style.

Heather Gadwa, LG





Source: USGS QUADRANGLE MAP: SUNNYSIDE, WA. (2017).



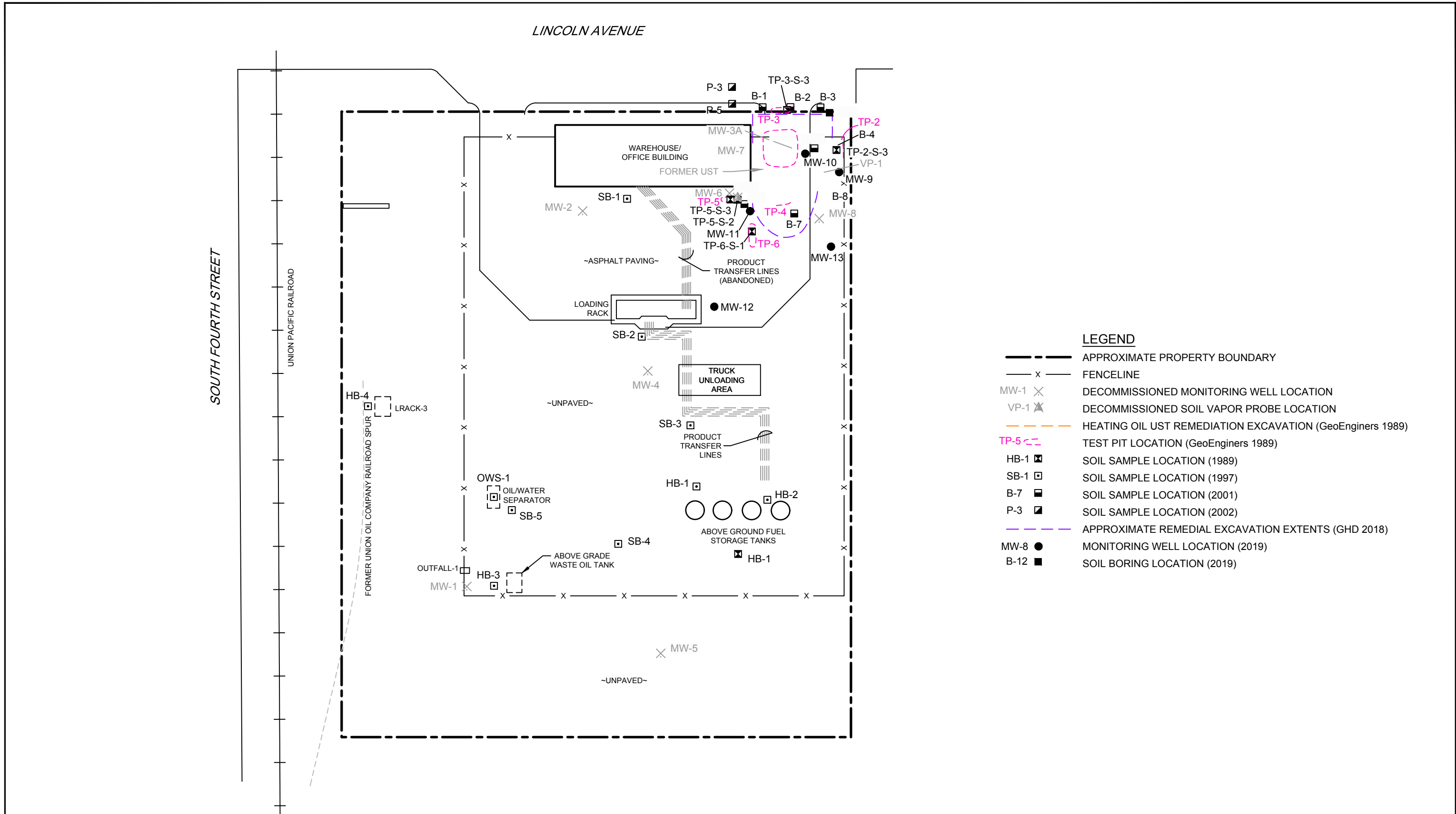
PHILLIPS 66 AOC 977
 511 E LINCOLN AVENUE
 SUNNYSIDE, WASHINGTON

SITE LOCATION MAP

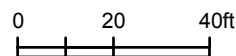
11145922-3RM00

Jul 12, 2019

FIGURE 1



Source: ARCADIS, FIGURE 2, SITE PLAN.



Coordinate System:
WASHINGTON SOUTH
STATE PLANE NAD83 FEET



PHILLIPS 66 AOC 977
511 E LINCOLN AVENUE
SUNNYSIDE, WASHINGTON

SITE PLAN

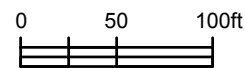
11145922-3RM00

Aug 19, 2019

FIGURE 2



Data Source: 10-2018 Imagery © 2019 Google Earth, Accessed: 2019.



Coordinate System:
WASHINGTON SOUTH
STATE PLANE NAD83 FEET



LEGEND

--- APPROXIMATE PROPERTY LINE



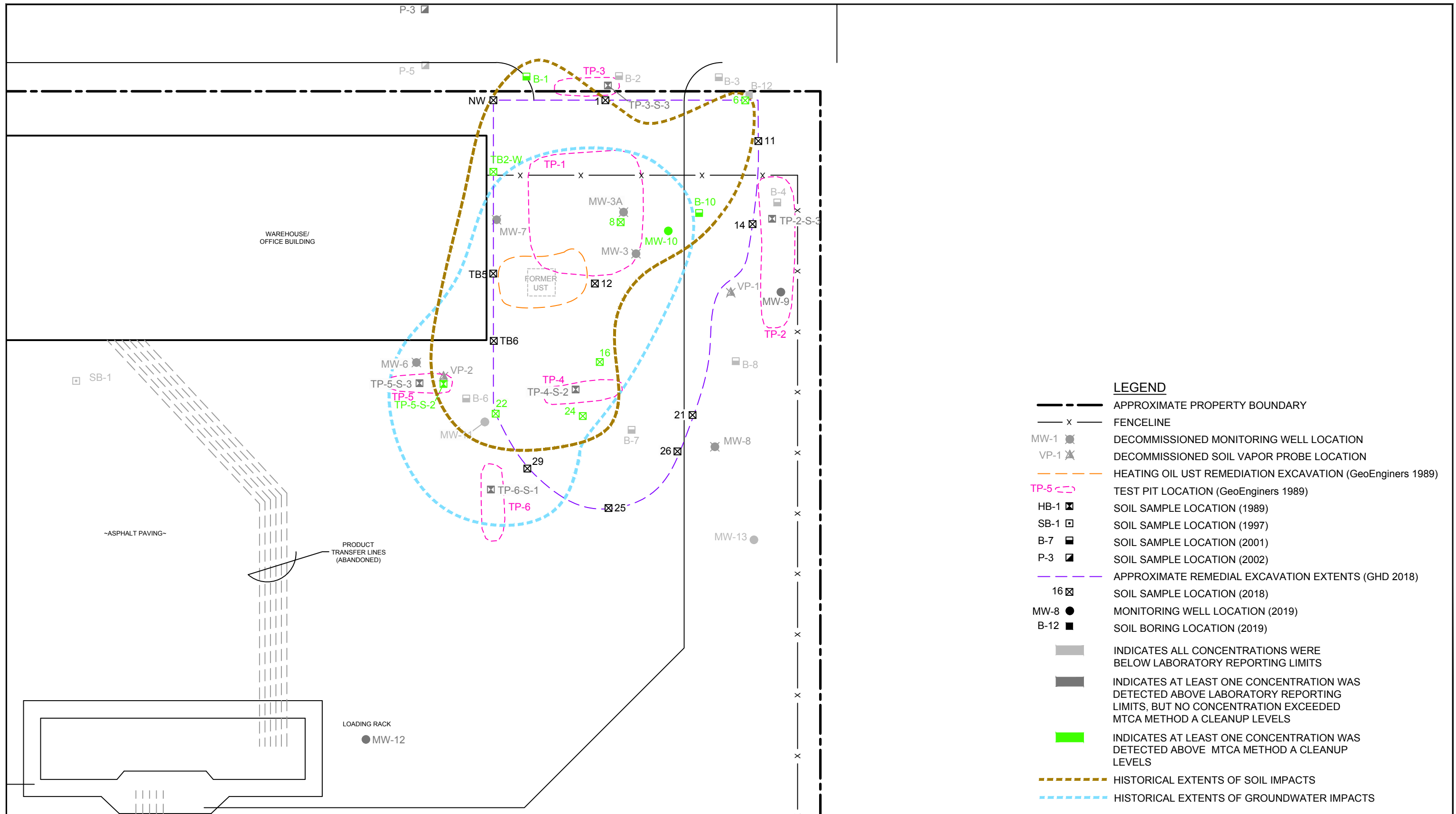
PHILLIPS 66 AOC 977
511 E LINCOLN AVENUE
SUNNYSIDE, WASHINGTON

AREA MAP

11145922-3RM00

Aug 19, 2019

FIGURE 3



- LEGEND**
- APPROXIMATE PROPERTY BOUNDARY
 - x — FENCELINE
 - MW-1 ● DECOMMISSIONED MONITORING WELL LOCATION
 - VP-1 ★ DECOMMISSIONED SOIL VAPOR PROBE LOCATION
 - HEATING OIL UST REMEDIATION EXCAVATION (GeoEngineers 1989)
 - TP-5 --- TEST PIT LOCATION (GeoEngineers 1989)
 - HB-1 ☒ SOIL SAMPLE LOCATION (1989)
 - SB-1 □ SOIL SAMPLE LOCATION (1997)
 - B-7 ■ SOIL SAMPLE LOCATION (2001)
 - P-3 ■ SOIL SAMPLE LOCATION (2002)
 - APPROXIMATE REMEDIAL EXCAVATION EXTENTS (GHD 2018)
 - 16 ☒ SOIL SAMPLE LOCATION (2018)
 - MW-8 ● MONITORING WELL LOCATION (2019)
 - B-12 ■ SOIL BORING LOCATION (2019)
 - INDICATES ALL CONCENTRATIONS WERE BELOW LABORATORY REPORTING LIMITS
 - INDICATES AT LEAST ONE CONCENTRATION WAS DETECTED ABOVE LABORATORY REPORTING LIMITS, BUT NO CONCENTRATION EXCEEDED MTCA METHOD A CLEANUP LEVELS
 - INDICATES AT LEAST ONE CONCENTRATION WAS DETECTED ABOVE MTCA METHOD A CLEANUP LEVELS
 - HISTORICAL EXTENTS OF SOIL IMPACTS
 - HISTORICAL EXTENTS OF GROUNDWATER IMPACTS

Source: ARCADIS, FIGURE 2, SITE PLAN.



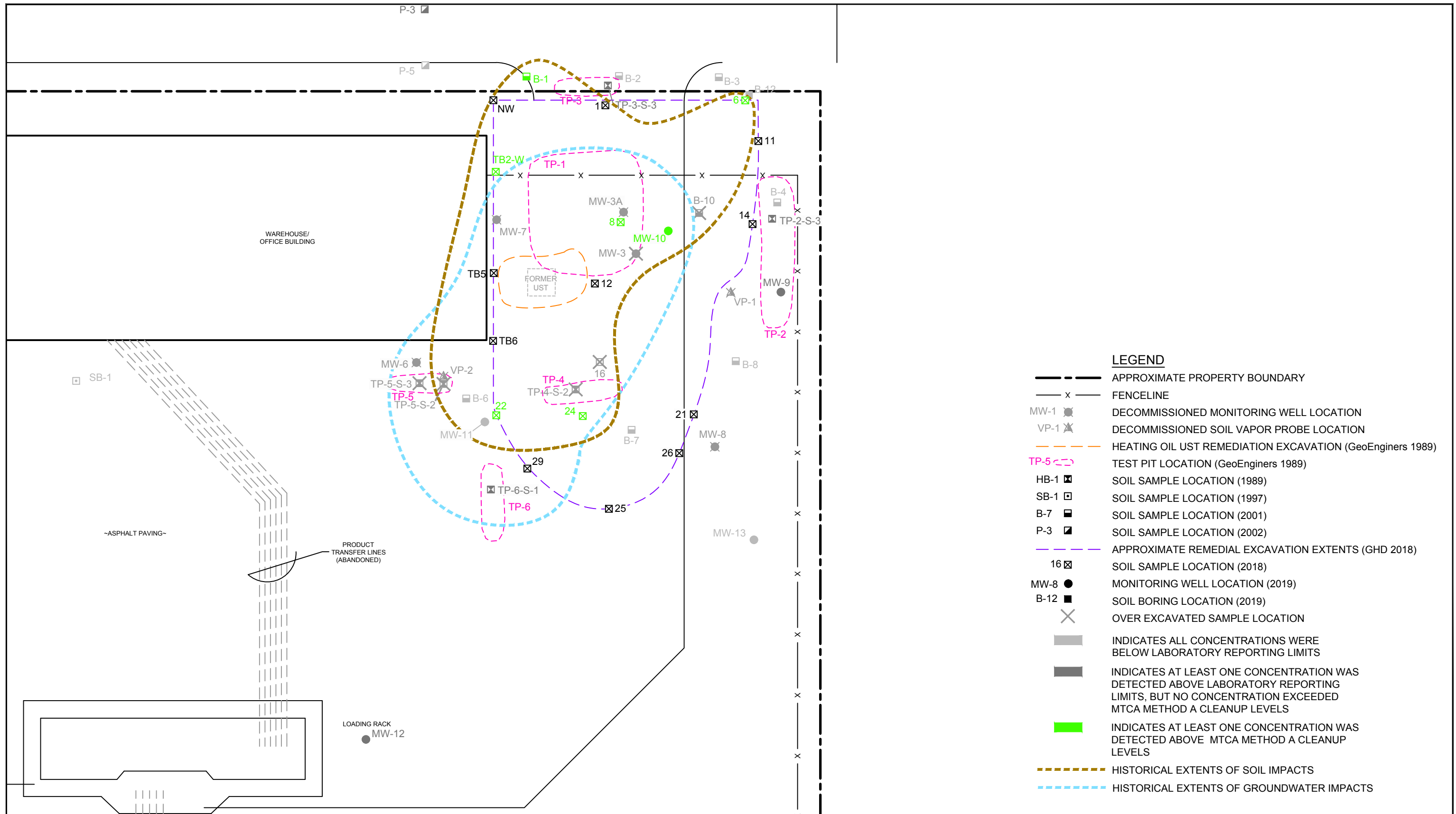
PHILLIPS 66 AOC 977
511 E LINCOLN AVENUE
SUNNYSIDE, WASHINGTON

11145922-3RM00

Aug 27, 2019

SOIL INVESTIGATION MAP

FIGURE 4



Source: ARCADIS, FIGURE 2, SITE PLAN.



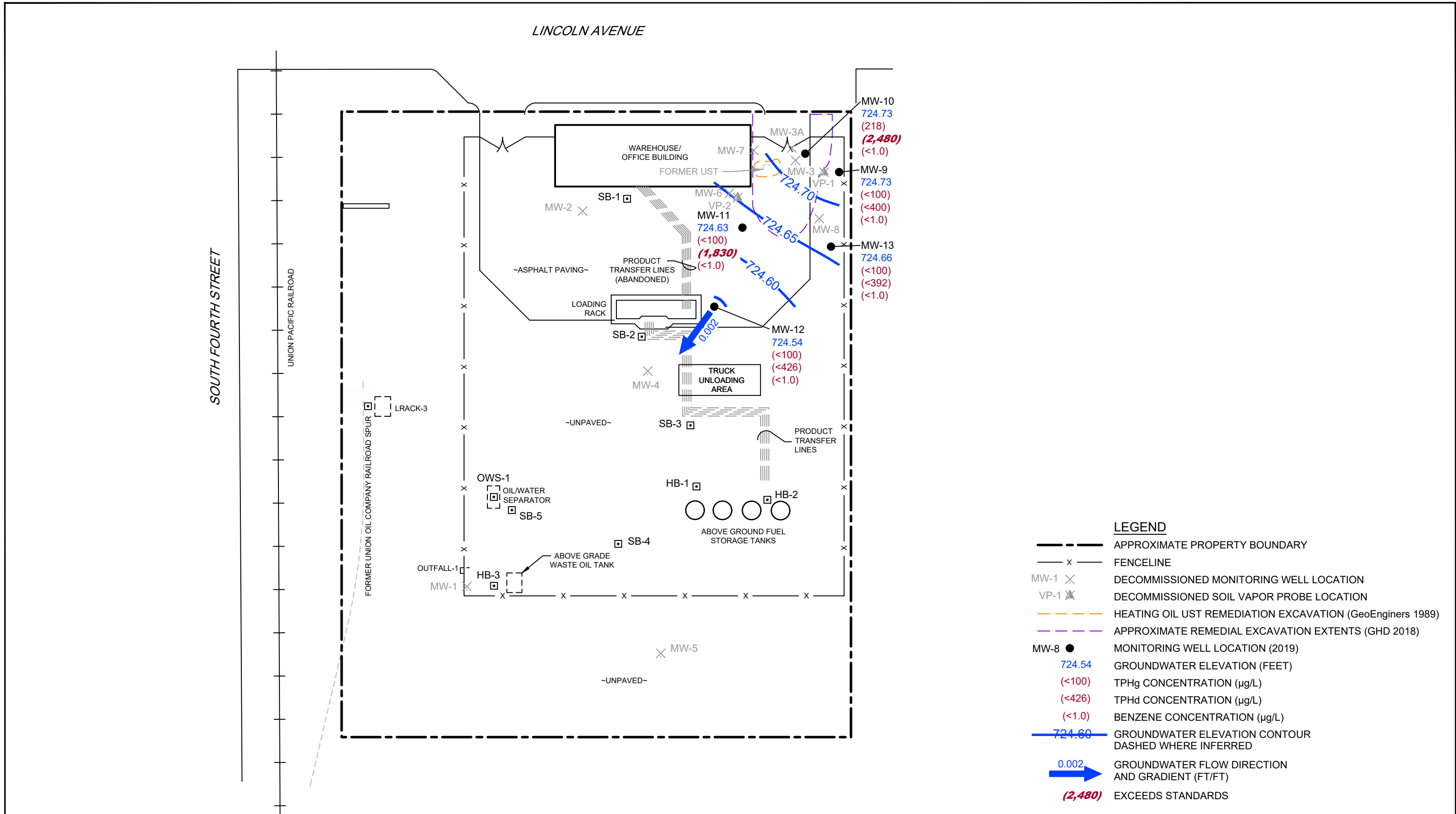
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SUNNYSIDE, WASHINGTON

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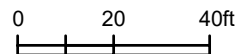
Aug 27, 2019

CURRENT SOIL CONDITIONS MAP

FIGURE 5



Source: LEIDOS, FIGURE 1, POTENTIOMETRIC MAP JANUARY 22, 2014., DATED 10/29/2014.



Coordinate System:
WASHINGTON SOUTH
STATE PLANE NAD83 FEET



PHILLIPS 66 AOC 977
511 E LINCOLN AVENUE
SUNNYSIDE, WASHINGTON

GROUNDWATER CONTOUR AND
CHEMICAL CONCENTRATION MAP - MAY 2, 2019

11145922-3RM00

Sep 18, 2019

FIGURE 6



Table 1
Soil Analytical Results
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Sample Location	Sample ID	Sample Date	Sample Depth (ft bgs)	Sample Location	TPH	TPH-G (mg/kg)	TPH-D (mg/kg)	TPH-O (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Naphthalene (mg/kg)
MTCA Method A Cleanup Levels:						100	2,000	2,000	0.03	7.0	6.0	9.0	0.1	5.0
MW-1	MW-1	3/30/1989	3.5	---	820	ND	540	---	---	---	---	---	---	---
MW-2	MW-2	3/30/1989	8.5	---	2.5	ND	40	---	---	---	---	---	---	---
MW-3	MW-3	3/30/1989	8.5	---	33,000	<500	23,000	---	---	---	---	---	---	---
MW-4	MW-4	3/30/1989	8.5	---	57	ND	84	---	---	---	---	---	---	---
MW-5	MW-5	3/30/1989	3.5	---	ND	ND	ND	---	---	---	---	---	---	---
HB-1	HB-1	3/30/1989	5	---	1.3	ND	ND	---	---	---	---	---	---	---
TP-2	TP-2-S-3	8/25/1989	7.5	---	230	---	---	---	---	---	---	---	---	---
TP-3	TP-3-S-3	8/25/1989	10	---	14	---	---	---	---	---	---	---	---	---
TP-4	TP-4-S-2	8/25/1989	7.5	---	11	<50	780	---	---	---	---	---	---	---
	TP-4-S-3	8/25/1989	7.5	---	<1	---	---	---	---	---	---	---	---	---
TP-5	TP-5-S-2	8/25/1989	8	---	15,000	---	---	---	---	---	---	---	---	---
	TP-5-S-3	8/25/1989	10	---	940	---	---	---	---	---	---	---	---	---
TP-6	TP-6-S-1	8/25/1989	8	---	1.1	---	---	---	---	---	---	---	---	---
---	Stockpile	8/25/1989	---	---	7,000	<50	670	---	---	---	---	---	---	---
HB-1	HB-1@3	10/7/1997	3	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
HB-2	HB-2@3	10/7/1997	3	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
HB-3	HB-3@3	10/7/1997	3	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
HB-4	HB-4@3	10/7/1997	3	---	---	ND	23.3	ND	ND	ND	ND	ND	---	---
SB-1	SB-1@5	10/7/1997	5	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
SB-2	SB-2@5	10/7/1997	5	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
SB-3	SB-3@5	10/7/1997	5	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
SB-4	SB-4@5	10/7/1997	5	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
SB-5	SB-5@5	10/7/1997	5	---	---	ND	ND	ND	ND	ND	ND	ND	---	---
MW-6	MW-6-3-7.5	3/19/1999	7.5	---	---	51	241	<25	<0.05	<0.05	<0.0650	<0.120	<1	---
	MW-6-4-10	3/19/1999	10	---	---	<5	<10	<25	<0.05	<0.05	<0.0650	<0.100	<1	---
B-1	B-1-8.5	4/1/2001	8.5	---	---	---	9,150	<1,020	---	---	---	---	---	---
	B-1-14	4/1/2001	14	---	---	---	45.6	<25	---	---	---	---	---	---
B-2	B-2-8.5	4/1/2001	8.5	---	---	---	<10	<25	---	---	---	---	---	---
B-3	B-3-8	4/1/2001	8	---	---	---	<10	<25	---	---	---	---	---	---
B-4	B-4-6.5	4/1/2001	6.5	---	---	---	<10	<25	---	---	---	---	---	---
B-5	B-5-6	4/1/2001	6	---	---	---	11.5	44.2	---	---	---	---	---	---
B-6	B-6-6.5	4/1/2001	6.5	---	---	---	<10	<25	---	---	---	---	---	---
B-7	B-7-7	4/1/2001	7	---	---	---	<10	<25	---	---	---	---	---	---
B-8	B-8-6.5	4/1/2001	6.5	---	---	---	<10	<25	---	---	---	---	---	---
B-9	B-9-11	4/1/2001	11	---	---	---	1,320	61.2	---	---	---	---	---	---
B-10	B-10-7.5	4/1/2001	7.5	---	---	---	16,200	<1,020	---	---	---	---	---	---
	B-10-10.5	4/1/2001	10.5	---	---	---	10.2	<25	---	---	---	---	---	---
B-11	B-11-8	4/1/2001	8	---	---	---	164	<25	---	---	---	---	---	---
P-3	P-3-5	10/25/2002	5	---	---	< 5	14.9	90	< 0.03	< 0.05	< 0.05	< 0.1	---	---
P-5	P-5-8	10/25/2002	8	---	---	< 5	<10	<25	< 0.03	< 0.05	< 0.05	< 0.1	---	---

Table 1
Soil Analytical Results
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Sample Location	Sample ID	Sample Date	Sample Depth (ft bgs)	Sample Location	TPH	TPH-G (mg/kg)	TPH-D (mg/kg)	TPH-O (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Naphthalene (mg/kg)
MTCA Method A Cleanup Levels:						100	2,000	2,000	0.03	7.0	6.0	9.0	0.1	5.0
						(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VP-1	VP-1	08/20/13	1-1.1	---	---	< 1	< 3.1	< 10	< 0.0050	< 0.0050	< 0.0050	< 0.015	< 0.050	---
	VP-1	08/20/13	3-3.5	---	---	< 1.4	< 3.6	< 12	< 0.0069	< 0.0069	< 0.0069	< 0.021	< 0.069	---
	VP-1	08/20/13	5-5.5	---	---	< 1.3	< 3.6	< 12	< 0.0066	< 0.0066	< 0.0066	< 0.020	< 0.066	---
VP-2	VP-2	08/21/13	1-1.1	---	---	< 1.1	< 3.2	< 11	< 0.0054	< 0.0054	< 0.0054	< 0.016	< 0.054	---
	VP-2	08/21/13	3-3.5	---	---	< 1.3	< 3.6	< 12	< 0.0063	< 0.0063	< 0.0063	< 0.019	< 0.063	---
	VP-2	08/21/13	5-5.5	---	---	< 1.4	< 3.8	< 13	< 0.0071	< 0.0071	< 0.0071	< 0.021	< 0.071	---
MW-8	MW-8	08/20/13	1-1.1	---	---	2.1	98	< 10	< 0.0057	0.0088	< 0.0057	< 0.017	< 0.057	---
	MW-8	08/20/13	5-5.5	---	---	< 1.3	< 3.7	< 12	< 0.0063	< 0.0063	< 0.0063	< 0.019	< 0.063	---
	MW-8	08/20/13	9-9.5	---	---	< 1.1	< 4.0	< 13	< 0.0056	< 0.0056	< 0.0056	< 0.017	< 0.056	---
TB-6	S-100818-EM-TB6-14	10/08/18	14	West sidewall at excavation bottom	---	56.3	195	<4.71	0.00081	<0.00075	0.00118	<0.00677	---	---
6	S-100818-EM-6-10 ^b	10/08/18	10	Sidewall at NE corner	---	160	1,200	10.3	<0.000508	0.00183	0.0245	0.35	<7.15	2.59
8	S-101018-EM-8-15 ^{a,b}	10/10/18	15	Bottom middle	---	419	2,620	25.4	0.00601	0.00401	1.04	0.035	<7.15	4.76
14	S-101018-EM-14-13	10/10/18	13	East sidewall	---	1.79	<1.98	<4.96	<0.000596	<0.00186	0.00212	<0.00712	---	---
16	S-101018-EM-16-7	10/10/18	7	middle of southern portion of excavation	---	362	10,300	83.8	0.00295	0.00318	0.29	2.11	---	---
NW	S-101118-EM-NW-14	10/11/18	14	Sidewall, bottom at NW corner	---	22.2	106	<123	<0.00123	<0.00616	<0.00308	<0.00801	---	---
TB-5	S-101118-EM-TB5-14	10/11/18	14	West sidewall, bottom	---	1.66	<5.43	<13.6	0.000615	<0.00679	0.00424	<0.00883	---	---
11	S-101118-EM-11-6	10/11/18	6	East Sidewall	---	89.7	70.6	<13.1	<0.00131	<0.00657	0.0267	0.0701	---	---
24	S-101118-EM-24-14	10/11/18	14	Bottom	---	166	308	<14.3	0.000997	<0.00713	0.00115	<0.00927	---	---
25	S-101118-EM-25-8	10/11/18	8	South sidewall	---	2.1	<5.07	<12.7	<0.00127	<0.00633	<0.00317	<0.00823	---	---
25	S-101618-EM-25-12	10/16/18	12	South sidewall, bottom	---	54	94.6	<13.4	<0.00134	<0.0067	<0.00335	<0.00871	---	---
22	S-101618-EM-22-7	10/16/18	7	Southwest sidewall	---	3,850	18,200	242	0.000692	<0.0062	0.0846	0.567	---	---
TB2	S-101618-EM-TB2-14	10/16/18	14	(TB2-W) West sidewall, bottom	---	322	276	<13.1	0.00611	0.0207	0.728	0.303	---	---
29	S-101618-EM-29-13	10/16/18	13	Southwest sidewall, bottom	---	8.96	<5.24	<13.1	<0.00131	<0.00654	<0.00327	<0.00851	---	---
26	S-101618-EM-26-7	10/16/18	7	Southeast sidewall	---	1.84	28.3	<12	<0.0012	<0.00602	<0.00301	<0.00783	---	---
1	S-101618-EM-1-8	10/16/18	8	North sidewall	---	1.7	<5.24	<13.1	<0.00131	<0.00654	<0.00327	<0.00851	---	---
---	S-100618-EM-SP1	10/06/18	---	Stockpile	---	1.73	26.6	62	0.000459	<0.00561	<0.0028	<0.00729	---	---
---	S-100818-EM-SP2	10/08/18	---	Stockpile	---	2.1	20.2	131	<0.00108	<0.00542	<0.00271	<0.00705	---	---
---	S-101518-EM-SP3	10/15/18	---	Stockpile	---	2.33	<86.6	123	<0.00115	0.0018	0.000879	<0.00746	---	---
B-12	SO-11145922-040419-BP-B-12-10	04/04/19	10	---	---	<0.82	<3.0	<5.4	<0.0035	<0.0034	<0.015	<0.015	---	---
	SO-11145922-040419-BP-B-12-16	04/04/19	16	---	---	<1.0	<3.1	<5.6	<0.004	<0.0042	<0.019	<0.018	---	---
MW-9	SO-11145922-040419-BP-MW-9-7	04/04/19	7	---	---	<0.73	<2.7	4.8J	<0.0031	<0.0030	<0.013	<0.013	---	---
	SO-11145922-040419-BP-MW-9-9	04/04/19	9	---	---	<0.86	<3.0	<5.4	<0.0037	<0.0036	<0.016	<0.015	---	---
MW-10	SO-11145922-040419-BP-MW-10-9	04/04/19	9	---	---	<0.91	16.8	60.7	<0.0039	<0.0038	<0.017	<0.016	---	---
	SO-11145922-040419-BP-MW-10-11	04/04/19	11	---	---	221	415	24	<0.0038	<0.0036	<0.016	<0.016	---	---
MW-11	SO-11145922-040419-BP-MW-11-9	04/04/19	9	---	---	<0.89	<3.2	<5.7	<0.0038	<0.0037	<0.017	<0.016	---	---
	SO-11145922-040419-BP-MW-11-11	04/04/19	11	---	---	<0.90	<3.1	<5.6	<0.0038	<0.0037	<0.017	<0.016	---	---
MW-12	SO-11145922-040419-BP-MW-12-7	04/04/19	7	---	---	<1.3	<3.3	18.1	<0.0056	<0.0054	<0.024	<0.023	---	---
	SO-11145922-040419-BP-MW-12-11	04/04/19	11	---	---	<0.086	<3.2	<5.6	<0.0037	<0.0035	<0.016	<0.015	---	---

Table 1
Soil Analytical Results
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Sample Location	Sample ID	Sample Date	Sample Depth	Sample Location	TPH	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Naphthalene
MTCA Method A Cleanup Levels:						100	2,000	2,000	0.03	7.0	6.0	9.0	0.1	5.0
					(ft bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MW-13	SO-11145922-040419-BP-MW-13-7	04/04/19	7	---	<1.1	<3.1	<5.5	<0.0046	<0.0044	<0.020	<0.019	---	---	
	SO-11145922-040419-BP-MW-13-9	04/04/19	9	---	<1.1	<3.4	<6.0	<0.0048	<0.0047	<0.021	<0.020	---	---	

Notes:

Bolded values indicate detected concentrations above MTCA Method A Cleanup Levels

Shaded cells indicate soil sample was subsequently over excavated.

MTCA = Model Toxics Control Act

USEPA = United States Environmental Protection Agency

ft bgs = feet below ground surface

< = Less than the stated laboratory reporting limit

TPH = Total Petroleum Hydrocarbons by EPA Method 418

Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Methyl tertiary butyl ether (MTBE), naphthalene analyzed by USEPA Method 8260B.

analyzed by USEPA Method 8260B.

Total and Dissolved lead analyzed by USEPA Method 6020.

Total petroleum hydrocarbon as gasoline (TPH-G) analyzed by Northwest Method NWTPH-Gx.

Total petroleum hydrocarbons as diesel (TPH-D) analyzed by Northwest Method NWTPH-Dx.

Total Petroleum hydrocarbons as oil (TPH-O) analyzed by Northwest Method NWTPH-Dx

^a Indicates sample is additionally analyzed for polychlorinated biphenyls (PCBs) by EPA Method 8082. All analytical results were either less than laboratory reporting limits and/or their respective MTCA Method A screening levels.

^b Indicates sample was additionally analyzed for extractable petroleum hydrocarbons (EPH) by method NWEPH, and volatile petroleum hydrocarbons (VPH) by method NWVPH.

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC Elevation MTCA Method A Cleanup Levels: (feet)	Depth to Water (feet)	SPH (feet)	GW Elevation (feet)	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead	
						1,000 (ug/L)	1,000/800 ^c (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1,000 (ug/L)	700 (ug/L)	1,000 (ug/L)	20 (ug/L)	-- (ug/L)	5 (ug/L)	0.01 (ug/L)	15 (ug/L)	15 (ug/L)			
MW-1	3/14/1989	--	--	--	--	<1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	8/25/1989	--	--	--	--	0.31	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<1.0	--	--	2.3	--	--	--	
MW-1	2/7/1991	--	--	--	--	<1,000	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	8/12/1991	--	--	--	--	<1,000	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	11/20/1991	--	--	--	717.01	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	2/17/1992	--	--	--	716.93	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	8/21/1992	--	--	--	716.06	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	2/23/1993	--	7.19	--	717.1	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	8/5/1993	--	8.53	--	715.76	--	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	2/15/1994	--	7.93	--	716.36	--	--	<250	--	--	--	<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	8/24/1994	--	8.99	--	715.3	--	--	<250	--	--	--	<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-1	2/24/1995	--	7.37	--	717.12	--	<50	<250	--	--	--	<750	--	<0.500	<0.500	<0.500	<1.0	--	--	--	--	--	--	
MW-1	8/24/1995	--	8.6	--	715.79	--	--	<250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/25/1997	--	7.6	--	716.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/18/1998	--	7.56	--	716.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/27/1998	--	8.29	--	716.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/24/99 ³	724.39	7.8	--	716.59	--	<50	<250	--	--	--	<500	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--	
MW-1	9/23/1999	724.39	8.16	--	716.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/22/00	724.39	7.32	0.00	724.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/14/00	731.75	7.90	0.00	723.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/12/01	731.75	7.97	0.00	723.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/13/01	731.75	8.53	0.00	723.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/19/02	731.75	7.96	0.00	723.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/25/02	731.75	8.41	0.00	723.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/11/03	731.75	7.36	0.00	724.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/24/03	731.75	8.43	0.00	723.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	10/23/03	731.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/10/04	731.75	7.45	0.00	724.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/15/04	731.75	8.10	0.00	723.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	04/07/05 ⁵	731.75	7.97	0.00	723.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/27/05	731.75	8.89	0.00	722.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/23/06	731.75	12.13	0.00	719.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/26/06	731.75	13.27	0.00	718.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/29/07	731.75	8.97	0.00	722.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/27/07	731.75	8.86	0.00	722.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/05/07	731.75	7.94	0.00	723.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	03/31/08	731.75	8.09	0.00	723.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	07/08/08	731.75	8.22	0.00	723.53	--	<50	<76	--	--	--	<95	--	<0.5	<0.7	<0.8	<0.8	0.6	ND	--	--	--	--	
MW-1	09/17/08	731.75	8.62	0.00	723.13	--	<50	<80	--	--	--	<100	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--	--	
MW-1	04/07/09	731.75	8.12	0.00	723.63	--	<50.0	<82	--	--	--	<410	--	<1.0	<1.0	<1.0	<3.0	1.8	--	<1.0	<0.010	2.21	<1.00	
MW-1	06/23/09	731.75	8.93	0.00	722.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	09/21/09	731.75	9.00	0.00	722.75	--	--	--	--	--	--	--	--	Gauge only	Gauge only	--	--	--	--	--	--	--	--	
MW-1	12/01/09	731.75	8.25	0.00	723.50	--	--	--	--	--	--	--	--	Gauge only	Gauge only	<1.0	<3.0	2.4	--	<1.0	<0.0095 MO	5.8	0.28	
MW-1	03/03/10	731.75	7.60	0.00	724.15	--	<50.0	<76.9	--	--	--	<385	--	<1.0	--	<1.0	<3.0	--	--	<1.0	--	--	--	
MW-1	06/15/10	731.75	7.85	0.00	723.90	--	--	--	--	--	--	--	--	Gauge only	Gauge only	--	--	--	--	--	--	--	--	
MW-1	09/01/10	731.75	8.71	0.00	723.04	--	--	--	--	--	--	--	--	Gauge only	Gauge only	--	--	--	--	--	--	--	--	
MW-1	12/16/10	731.75	7.45	0.00	724.30	--	--	--	--	--	--	--	--	Gauge only	Gauge only	--	--	--	--	--	--	--	--	
MW-1	03/07/11	731.75	7.72	0.00	724.03	--	<50.0	<78.4	--	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	
MW-1	05/11/11	731.75	7.93	0.00	723.82	--	<50.0	<78.4	--	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	
MW-1	08/03/11	731.75	8.39	0.00	723.36	--	<50.0	<80.0	--	--	--	<400	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	
MW-1	12/09/11	731.75	8.03	0.00	723.72	--	<50	<29	<30	<30	<30	<68	<70	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	01/09/12	731.75	8.11	0.00	723.64	--	<50	360	51	51	51	<68	95	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	07/24/12	731.75	8.47	0.00	723.28	--	<50	<30	<30	<30	<30	<70	<70	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	01/08/13	731.75	7.30	0.00	724.45	--	<50	<30	<30	<30	<30	<70	<70	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	09/30/13	731.75	8.30	0.00	723.45	--	<50	<31	<31	<31	<73	<73	<73	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	01/22/14	731.75	8.55	0.00	723.20	--	<50	<28	<28	<28	<66	<66	<66	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-1	07/30/14	731.75	9.05	0.00	722.70	--	<50	<28	<28	<28	<66	<66	<66	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	3/14/1989	--	--	--	--	<1,000	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	8/25/1989	--	--	--	--	0.73	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<1.0	--	--	--	--	--	--	
MW-2	2/7/1991	--	--	--	--	<1,000	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	8/12/1991	--	--	--	--	<1,000	--	--	--	--	--	--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	11/20/1991	--	--	--	717.53	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	2/17/1992	--	--	--	717.47	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	8/21/1992	--	--	--	716.58	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	2/23/1993	--	9.72	--	717.57	--	--	--	--	--	--	<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	8/5/1993	--	10.93	--	716.36	--	--	<250	--	--	--	<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	2/15/1994	--	10.43	--	716.86	--	--	<250	--	--	--	<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--	
MW-2	8/24/1994	--	11.39	--	715.9	--	--	<250	--	--	--	<750												

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC Elevation MTCA Method A Cleanup Levels: (feet)	Depth to Water (feet)	SPH (feet)	GW Elevation (feet)	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead	
						1,000 (ug/L)	1,000/800 ^c (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1,000 (ug/L)	700 (ug/L)	1,000 (ug/L)	20 (ug/L)	-- (ug/L)	5 (ug/L)	0.01 (ug/L)	15 (ug/L)	15 (ug/L)			
MW-2	3/18/1998	--	10.18	--	717.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/27/1998	--	10.85	--	716.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/24/99 ³	727.55	10.4	--	717.15	--	<50	<250	--	--	<500	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--	--	
MW-2	9/23/1999	727.55	10.76	--	716.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/22/00	727.39	9.95	0.00	724.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/14/00	734.74	10.48	0.00	724.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	04/12/01	734.74	10.58	0.00	724.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/13/01	734.74	11.04	0.00	723.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/19/02	734.74	10.58	0.00	724.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/25/02	734.74	10.81	0.00	723.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/11/03	734.74	10.10	0.00	724.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/24/03	734.74	10.85	0.00	723.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	10/23/03	734.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/10/04	734.74	9.88	0.00	724.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/15/04	734.74	10.55	0.00	724.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	04/07/05 ⁵	734.74	10.44	0.00	724.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/27/05	734.74	11.31	0.00	723.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/23/06	734.74	13.94	0.00	720.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/26/06	734.74	15.01	0.00	719.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/29/07	734.74	11.36	0.00	723.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	09/27/07	734.74	11.25	0.00	723.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/05/07	734.74	10.42	0.00	724.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	03/31/08	734.74	10.51	0.00	724.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	07/08/08	734.74	11.09	0.00	723.65	--	<50	<75	--	--	<94	--	<0.5	<0.7	<0.8	<0.8	<0.5	ND	--	--	--	--	--	
MW-2	09/17/08	734.74	11.00	0.00	723.74	--	<50	<79	--	--	<98	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--	--	--	
MW-2	04/07/09	734.74	10.60	0.00	724.14	--	<50.0	<82	--	--	<410	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.010	<1.00	1.58	--	
MW-2	06/23/09	734.74	11.32	0.00	723.42	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--	
MW-2	09/21/09	734.74	11.50	0.00	723.24	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--	
MW-2	12/01/09	734.74	10.75	0.00	723.99	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--	
MW-2	03/03/10	734.74	10.03	0.00	724.71	--	<50.0	<76.9	--	--	<385	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.0096 MO	0.45	0.20	--	
MW-2	06/15/10	734.74	10.33	0.00	724.41	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	09/01/10	734.74	11.11	0.00	723.63	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	12/16/10	734.74	10.01	0.00	724.73	--	<50.0	<77.7	--	--	<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	03/07/11	734.74	10.15	0.00	724.59	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	05/11/11	734.74	10.30	0.00	724.44	--	<50.0	<77.7	--	--	<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	08/03/11	734.74	10.76	0.00	723.98	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--	--	
MW-2	12/09/11	734.74	10.50	0.00	724.24	--	<50	<30	<31	<70	<72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	01/09/12	734.74	10.55	0.00	724.19	--	<50	<28	77	<66	260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	07/24/12	734.74	10.91	0.00	723.83	--	<50	<30	<30	<70	<70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	01/08/13	734.74	9.78	0.00	724.96	--	<50	<30	<30	<71	<71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	09/30/13	734.74	10.70	0.00	724.04	--	<50	<30	<30	<69	<69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	01/22/14	734.74	10.80	0.00	723.94	--	<50	<33	<33	<77	<77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-2	07/30/14	734.74	11.29	0.00	723.45	--	<50	<29	<29	<67	<67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	
MW-3A ¹	11/20/1991	--	--	--	717.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	2/17/1992	--	--	--	717.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	8/21/1992	--	--	--	716.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	2/23/1993	--	9.82	--	717.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	8/5/1993	--	13.08	--	716.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	2/15/1994	--	12.04	--	716.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	8/24/1994	--	13.35	--	715.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	2/24/1995	--	10.52	--	717.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	8/24/1995	--	12.56	--	715.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	9/25/1997	--	11.17	--	716.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	3/18/1998	--	10.94	--	716.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	9/27/1998	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	03/24/99 ³	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	03/22/00 ²	727.46	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	09/14/00	727.46	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	04/12/01	727.46	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	09/13/01	727.46	--	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	03/19/02 ²	727.46	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	09/12/02	727.46	--	0.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	09/25/02 ²	727.46	--	trace	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	03/11/03 ²	727.46	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	09/24/03 ²	727.46	--	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	10/23/03	727.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3A ¹	03/10/04	727.46	10.53	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC	Depth to	SPH	GW	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead
		Elevation	Water		Elevation	1,000	1,000/800 ^c		500	500	500	500	500	5	1,000	700	1,000	20	--	5	0.01	15	15
		MTCA Method A Cleanup Levels:				(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
		(feet)	(feet)	(feet)	(feet)																		
MW-4	03/29/07	725.75	9.86	0.00	723.23	--	--		154	--		<100	--	--	--	--	--	--	--	--	--	--	--
MW-4	09/27/07	725.75	9.75	0.00	723.34	--	--		<79	--		<99	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/05/07	725.75	8.93	0.00	724.16	--	--		<76	--		<95	--	--	--	--	--	--	--	--	--	--	--
MW-4	03/31/08	725.75	9.02	0.00	724.07	--	--		<77	--		<96	--	--	--	--	--	--	--	--	--	--	--
MW-4	07/08/08	725.75	9.35	0.00	723.74	--	<50		<75	--		<94	--	<0.5	<0.7	<0.8	<0.8	<0.5	ND	--	--	--	--
MW-4	09/17/08	725.75	9.52	0.00	723.57	--	<50		<78	--		<97	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--	--
MW-4	04/07/09	725.75	9.11	0.00	723.98	--	<50.0		<82	--		<410	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.010	1.06	<1.00 R,N
MW-4	06/26/09	725.75	9.80	0.00	723.29	--																	
MW-4	09/21/09	725.75	9.92	0.00	723.17	--																	
MW-4	12/01/09	725.75	9.24	0.00	723.85	--																	
MW-4	03/03/10	725.75	8.50	0.00	724.59	--	<50.0		<76.9	--		<385	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.0098 MO	1.4	0.18
MW-4	06/15/10	725.75	8.49	0.00	724.60	--	<50.0		<77.7	--		<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	09/01/10	725.75	9.62	0.00	723.47	--	<50.0		<77.7	--		<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	12/16/10	725.75	8.41	0.00	724.68	--	<50.0		99.2	--		<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	03/07/11	725.75	8.64	0.00	724.45	--	<50.0		<78.4	--		<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	05/11/11	725.75	8.76	0.00	724.33	--	444		<78.4	--		<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	08/03/11	725.75	9.24	0.00	723.85	--	<50		<78.4	--		<392	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-4	12/09/11	725.75	9.00	0.00	724.09	--	<50		160	<30		<69	<71	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	01/09/12	725.75	9.10	0.00	723.99	--	<50		140	31		<67	100	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	07/24/12	725.75	9.41	0.00	723.68	--	<50		120	<30		110	<70	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	01/08/13	725.75	8.30	0.00	724.79	--	<50		110	<31		<72	<72	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	09/30/13	733.09	8.97	0.00	724.12	--	<50		85	<29		<68	<68	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	01/22/14	733.09	9.30	0.00	723.79	--	<50		180	<39		<91	<91	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-4	07/30/14	733.09	9.83	0.00	723.26	--	<50		110	<29		<67	<67	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-5	3/14/1989	--	--	--	--	<1,000	--		--	--		--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	8/25/1989	--	--	--	--	0.88	--		--	--		--	--	<0.500	<0.500	<0.500	<1.0	--	--	--	--	--	--
MW-5	2/7/1991	--	--	--	--	<1,000	--		--	--		--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	8/12/1991	--	--	--	--	<1,000	--		--	--		--	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	11/20/1991	--	--	--	717.12	--	--		--	--		<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	2/17/1992	--	--	--	717.03	--	--		--	--		<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	8/21/1992	--	--	--	716.11	--	--		--	--		<1,000	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	2/23/1993	--	6.02	--	717.21	--	--		--	--		<1,000	--	<0.500	11	<0.500	<0.500	--	--	--	--	--	--
MW-5	8/5/1993	--	7.39	--	715.84	--	--	<250	--	--		<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	2/15/1994	--	6.79	--	716.44	--	--	<250	--	--		<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	8/24/1994	--	7.78	--	715.45	--	--	<250	--	--		<750	--	<0.500	<0.500	<0.500	<0.500	--	--	--	--	--	--
MW-5	2/24/1995	--	6.29	--	717.09	--	<50	<250	--	--		<750	--	<0.500	<0.500	<0.500	<1.0	--	--	--	--	--	--
MW-5	8/24/1995	--	5.33	--	718.05	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	9/25/1997	--	6.41	--	716.97	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	3/18/1998	--	6.45	--	716.93	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	9/27/1998	--	7.16	--	716.22	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	03/24/99 ³	723.38	6.68	--	716.7	--	<50	<250	--	--		<500	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--
MW-5	9/23/1999	723.38	7.03	--	716.35	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	03/22/00	723.38	6.09	0.00	724.56	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	09/14/00	723.32	6.84	0.00	723.81	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	04/12/01	723.32	6.88	0.00	723.77	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	09/13/01	723.32	7.42	0.00	723.23	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-5	03/19/02 ⁴	723.32	6.88	0.00	723.77	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC Elevation MTCA Method A Cleanup Levels: (feet)	Depth to Water (feet)	SPH (feet)	GW Elevation (feet)	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead
						1,000 (ug/L)	1,000/800 ^c (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1,000 (ug/L)	700 (ug/L)	1,000 (ug/L)	20 (ug/L)	-- (ug/L)	5 (ug/L)	0.01 (ug/L)	15 (ug/L)	15 (ug/L)		
MW-5 723.32	09/25/02	723.32	7.25	0.00	723.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/11/03	723.32	6.35	0.00	724.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/24/03	723.32	7.30	0.00	723.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	10/23/03	723.32	--	--	--	--	--	<250	--	--	<500	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/10/04	723.32	6.38	0.00	724.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/15/04	723.32	6.94	0.00	723.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	04/07/05 ⁵	723.32	6.81	0.00	723.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/27/05	723.32	7.77	0.00	722.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/23/06	723.32	11.03	0.00	719.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/26/06	723.32	12.11	0.00	718.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/29/07	723.32	7.84	0.00	722.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/27/07	723.32	7.72	0.00	722.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	12/05/07	723.32	6.80	0.00	723.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/31/08	723.32	7.03	0.00	723.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5 723.32	07/08/08	723.32	8.29	0.00	722.36	--	<50	<76	--	--	<95	--	<0.5	<0.7	<0.8	<0.8	<0.5	ND	--	--	--	--	--
MW-5 723.32	09/17/08	723.32	7.50	0.00	723.15	--	<50	<77	--	--	<97	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--	--	--
MW-5 723.32	04/07/09	723.32	6.98	0.00	723.67	--	<50.0	<84	--	--	<420	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.010	1.00	<1.00 R,N	
MW-5 723.32	06/23/09	723.32	7.82	0.00	722.83	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/21/09	723.32	7.90	0.00	722.75	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	12/01/09	723.32	7.11	0.00	723.54	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/03/10	723.32	6.45	0.00	724.20	--	<50.0	<76.9	--	--	<385	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.0096 MO	0.56	0.13	
MW-5 723.32	06/15/10	723.32	6.77	0.00	723.88	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	09/01/10	723.32	7.59	0.00	723.06	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	12/16/10	723.32	6.30	0.00	724.35	--	--	--	--	--	--	--	--	Gauge only	--	--	--	--	--	--	--	--	--
MW-5 723.32	03/07/11	723.32	6.54	0.00	724.11	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--
MW-5 723.32	05/11/11	723.32	6.77	0.00	723.88	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--
MW-5 723.32	08/03/11	723.32	7.28	0.00	723.37	--	<50.0	<78.4	--	--	<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--
MW-5 723.32	12/09/11	723.32	6.99	0.00	723.66	--	<50	32	<31	--	<67	<71	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	01/09/12	723.32	6.92	0.00	723.73	--	<50	<29	<29	--	<68	80	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	07/24/12	723.32	7.30	0.00	723.35	--	<50	<30	<30	--	<70	<70	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	01/08/13	723.32	6.15	0.00	724.50	--	<50	<31	<31	--	<72	<72	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	09/30/13	730.85	9.09	0.00	721.56	--	<50	140	93	--	<69	<69	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	01/22/14	730.85	7.30	0.00	723.35	--	<50	<31	<31	--	<72	<72	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-5 723.32	07/30/14	730.85	7.88	0.00	722.77	--	<50	<28	<28	--	<66	<66	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
SB-1@9W	10/07/97	--	--	--	--	--	ND	511	--	--	ND	--	ND	0.595	ND	ND	ND	ND	--	--	--	--	--
SB-2@11W	10/06/97	--	--	--	--	--	ND	599	--	--	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--
SB-3@9W	10/07/97	--	--	--	--	--	ND	305	--	--	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC Elevation MTCA Method A Cleanup Levels: (feet)	Depth to Water (feet)	SPH (feet)	GW Elevation (feet)	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead
						1,000 (ug/L)	1,000/800 ^c (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1,000 (ug/L)	700 (ug/L)	1,000 (ug/L)	20 (ug/L)	-- (ug/L)	5 (ug/L)	0.01 (ug/L)	15 (ug/L)	15 (ug/L)		
SB-4@9W	10/07/97	--	--	--	--	--	ND		411	--		ND	--	ND	0.617	ND	ND	ND	--	--	--	--	--
SB-5@9W	10/07/97	--	--	--	--	--	ND		ND	--		ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
MW-6 727.17	03/24/99	--	10.10	--	717.94	--	<50		<250	--		<500	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--
MW-6 727.17	09/23/99	--	10.50	--	717.54	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/22/00 ³	727.94	9.66	0.00	724.87	--	<50		<250	--		<500	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--
MW-6 727.17	09/14/00	727.94	10.20	0.00	724.33	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	04/12/01	727.17	10.29	0.00	724.24	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/13/01	727.17	10.65	0.00	723.88	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/19/02 ⁴	727.17	10.20	0.00	724.33	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/25/02	727.17	10.50	0.00	724.03	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/11/03	727.17	9.69	0.00	724.84	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/24/03	727.17	10.57	0.00	723.96	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	10/23/03	727.17	--	--	--	--	--		<250	--		<500	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/10/04	727.17	9.60	0.00	724.93	--	--		<125	--		<249	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/15/04	727.17	10.21	0.00	724.32	--	--		<249	--		<498	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	04/07/05 ⁵	727.17	10.14	0.00	724.39	--	--		<247	--		<494	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/27/05	727.17	10.99	0.00	723.54	--	--		440	--		120	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/23/06	727.17	13.56	0.00	720.97	--	--		<800	--		<1,000	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/26/06	727.17	14.65	0.00	719.88	--	--		100	--		<98	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/29/07	727.17	11.04	0.00	723.49	--	--		110	--		<99	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	09/27/07	727.17	11.55	0.00	722.98	--	--		110	--		<99	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	12/05/07	727.17	10.11	0.00	724.42	--	--		300	--		<97	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	03/31/08	727.17	10.20	0.00	724.33	--	--		260	--		<97	--	--	--	--	--	--	--	--	--	--	--
MW-6 727.17	07/08/08	727.17	10.82	0.00	723.71	--	<50		430	--		<500	--	<0.5	<0.7	<0.8	<0.8	<0.5	ND	--	--	--	--
MW-6 727.17	09/17/08	727.17	10.70	0.00	723.83	--	<50		160	--		<96	--	<0.5	<0.7	<0.8	<0.8	<0.5	--	--	--	--	--
MW-6 727.17	04/07/09	727.17	10.30	0.00	724.23	--	<50.0		<84	--		<420	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.010	2.04	<1.00 R,N
MW-6 727.17	06/23/09	727.17	11.03	0.00	723.50	--	--							Gauge only									
MW-6 727.17	09/21/09	727.17	11.19	0.00	723.34	--	--							Gauge only									
MW-6 727.17	12/01/09	727.17	10.45	0.00	724.08	--	--							Gauge only									
MW-6 727.17	03/03/10	727.17	9.72	0.00	724.81	--	<50.0		<76.9	--		<385	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	<0.0097 MO	4.2	0.16
MW-6 727.17	06/15/10	727.17	9.96	0.00	724.57	--	<50.0		182	--		<388	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-6 727.17	09/01/10	727.17	10.82	0.00	723.71	--	<50.0		<76.9	--		<385	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--
MW-6 727.17	12/16/10	727.17	9.74	0.00	724.79	--	<50.0		<78.4	--		<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--
MW-6 727.17	03/07/11	727.17	9.84	0.00	724.69	--	<50.0		102	--		<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--
MW-6 727.17	05/11/11	727.17	9.96	0.00	724.57	--	<50.0		<77.7	--		<388	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--
MW-6 727.17	08/03/11	727.17	10.45	0.00	724.08	--	<50.0		<78.4	--		<392	--	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--

Table 2
Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington

Well ID	Sample Date	TOC Elevation MTCA Method A Cleanup Levels: (feet)	Depth to Water (feet)	SPH (feet)	GW Elevation (feet)	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead
						1,000 (ug/L)	1,000/800 ^c (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	500 (ug/L)	5 (ug/L)	1,000 (ug/L)	700 (ug/L)	1,000 (ug/L)	20 (ug/L)	-- (ug/L)	5 (ug/L)	0.01 (ug/L)	15 (ug/L)	15 (ug/L)		
MW-6 727.17	12/09/11	727.17	10.23	0.00	724.30	--	<50		600	<28		72	<66	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	01/09/12	727.17	10.22	0.00	724.31	--	<50		260	<30		<69	74	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	07/24/12	727.17	10.62	0.00	723.91	--	<50		430	<30		160	<69	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	01/08/13	727.17	9.48	0.00	725.05	--	<50		460	<31		<72	<72	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	09/30/13	734.53	10.61	0.00	723.92	--	<50		290	<29		<68	<68	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	01/22/14	734.53	10.65	0.00	723.88	--	<50		250	<30		<71	<71	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-6 727.17	07/30/14	734.53	11.11	0.00	723.42	--	<50		280	<28		<66	<66	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
P-3	10/25/02	--	--	--	--	--	--		<532	--		<1,060	--	--	--	--	--	--	--	--	--	--	--
MW-7	04/07/05 ⁵	727.79	10.70	0.00	--	--	--		7,040	--		<520	--	--	--	--	--	--	--	--	--	--	--
MW-7	09/27/05	727.79	11.57	0.00	--	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	03/23/06	735.16	12.39	0.00	--	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	09/26/06	735.16	12.37	0.00	--	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	03/29/07	735.16	11.67	0.00	723.49	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	12/05/07	735.16	10.70	0.00	724.46	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	03/31/08	735.16	10.79	0.00	724.37	--	--		--	--		--	--	--	--	--	--	--	--	--	--	--	--
MW-7	07/08/08	735.16	11.22	0.00	723.94	--	450		18,000	--		<2,100	--	1	<0.7	4	7	<0.5	ND	--	--	--	--
MW-7	09/17/08	735.16	11.30	0.00	723.86	--	3,500		3,300,000	--		<200,000	--	1	<0.7	9	17	<0.5	--	--	--	--	--
MW-7	04/07/09	735.16	10.88	0.00	724.28	--	1,380		1,300	--		<420	--	1.1	<1.0	5.5	12	<1.0	--	<1.0	<0.010	<1.00	<1.00
MW-7	06/23/09	735.16	11.74	0.00	723.42	--	3,350 2n,B+		16,200,000	--		322,000	--	1.1	<1.0	7.1	13.9	<1.0	--	--	--	--	--
MW-7	09/21/09	735.16	11.78	0.00	723.38	--	3,030		--	--		--	--	1.1	<1.0	6.0	9.7	<1.0	--	--	--	--	--
MW-7	12/01/09	735.16	11.05	0.00	724.11	--	1,250 2n,Z2		2,100	--		210 J	--	1.3	<1.0	9.6	17.4	<1.0	--	--	--	--	--
MW-7	03/03/10	735.16	10.34	0.00	724.82	--	1,090		1,470	--		<385	--	1.3	<1.0	8.2	13.9	<1.0	--	<1.0	<0.0098 MO	0.90	0.36
MW-7	06/15/10	735.16	10.61	0.00	724.55	--	863		4,010	--		696	--	1.5	<1.0	5.6	8.1	<1.0	--	--	--	--	--
MW-7	09/01/10	735.16	11.40	0.00	723.76	--	1,210		7,150	--		<690	--	2.1	<1.0	7.6	9.5	--	--	--	--	--	--
MW-7	12/16/10	735.16	10.25	0.00	724.91	--	1,240		2,390	--		<392	--	1.2	<1.0	8.0	8.3	--	--	--	--	--	--
MW-7	03/07/11	735.16	10.42	0.00	724.74	--	2,280		2,930	--		492	--	1.6	<1.0	8.1	8.4	--	--	--	--	--	--
MW-7	05/11/11	735.16	10.56	0.00	724.60	--	1,700		2,810	--		<408	--	1.4	<1.0	7.1	6.9	--	--	--	--	--	--
MW-7	08/03/11	735.16	11.03	0.00	724.13	--	2,270		1,870	--		<392	--	1.7	<1.0	5.3	4.4	--	--	--	--	--	--
MW-7	12/09/11	735.16	10.80	0.00	724.36	--	1,500		14,000	730		2,000	<66	1	<0.5	6	5	--	--	--	--	--	--
MW-7	01/09/12	735.16	10.83	0.00	724.33	--	990		16,000	840		740	79	1	<0.5	6	5	--	--	--	--	--	--
MW-7	07/24/12	735.16	11.22	0.00	723.94	--	1,100		3,000	300		240	150	1	<0.5	4	3	--	--	--	--	--	--
MW-7	01/08/13	735.16	10.03	0.00	725.13	--	1,400		12,000	1,300		1,500	<70	1	<0.5	9	8	--	--	--	--	--	--
MW-7	09/30/13	735.16	11.00	0.00	724.16	--	990		20,000	11,000		470	170	1	<0.5	7	4	--	--	--	--	--	--
MW-7	01/22/14	735.16	11.05	0.00	724.11	--	1,300		21,000	17,000		<740	<370	0.9	<0.5	6	3	--	--	--	--	--	--
MW-7	07/30/14	735.16	12.08	0.00	723.08	--	--		--	--		Insufficient water to collect sample											
MW-8	09/30/13	733.65	9.60	0.00	724.05	--	71		1,700	1,100		<71	<71	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-8	01/22/14	733.65	9.77	0.00	723.88	--	<50		91	34		<75	<75	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-8	07/30/14	733.65	10.19	0.00	723.46	--	<50		31	<29		<67	<67	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW-9	5/2/2019	734.67	9.94	--	724.73	--	<100	<400	--	--	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-10	5/2/2019	734.65	9.92	--	724.73	--	218	3,480	--	--	705	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-11	5/2/2019	734.23	9.6	--	724.63	--	<100	1,830	--	--	<426	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--

Table 2

**Groundwater Monitoring Data
Former Unocal Bulk Fuel Plant 0766
Phillips 66 Company
Sunnyside, Washington**

Well ID	Sample Date	TOC	Depth to	SPH	GW	TPH	TPH-G	TPH-D	TPH-D ^a	TPH-D ^b	TPH-O	TPH-O ^a	TPH-O ^b	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	VOCs	EDC	EDB	Total Lead	Dissolved Lead
		Elevation	Water		Elevation	1,000	1,000/800 ^c		500	500	500	500	5	1,000	700	1,000	20	--	5	0.01	15	15	
		MTCA Method A Cleanup Levels:				(ug/L)	(ug/L)		(ug/L)	(ug/L)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-12	5/2/2019	733.22	8.68	--	724.54	<100	<426	--	--	--	<426	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--
MW-13	5/2/2019	733.66	9	--	724.66	<100	<392	--	--	--	<392	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--	--

Notes:

Groundwater monitoring data, top of casing elevations, and laboratory analytical results prior to January 22, 2014 provided by Arcadis. Bolding indicates a concentration greater than MTCA Method A Cleanup level.

Well TOC elevations were resurveyed on September 12, 2013 in reference to North American Vertical Datum of 1988.

Previous TOC elevations relative to a site benchmark of assumed elevation of 730 feet. All GW elevations were calculated using the 2013 survey data.

Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) analyzed by USEPA Method 8260B.

Methyl tertiary butyl ether (MTBE) analyzed by USEPA Method 8260B.

Total and Dissolved lead analyzed by USEPA Method 6020.

Total petroleum hydrocarbon as gasoline (TPH-G) analyzed by Northwest Method NWTPH-Gx.

Total petroleum hydrocarbons as diesel (TPH-D) analyzed by Northwest Method NWTPH-Dx.

Total Petroleum hydrocarbons as oil (TPH-O) analyzed by Northwest Method NWTPH-Dx

ft = feet

MTCA = Model Toxic Control Act

ND = Not detected above the laboratory reporting limits.

NE = Not established

SPH = Liquid-phase hydrocarbon thickness

< = Less than the stated laboratory reporting limit

µg/L = micrograms per liter

a quick acid-silica gel cleanup method used

b 10-gram column acid-silica gel cleanup method used

c MTCA Method A Cleanup Level for TPH-G is 800 µg/L if benzene is detectable in groundwater. 1 Top-of-casing elevation was first surveyed in January 2007.

2 A product trap was present in the well on this date. The product trap was removed prior to measuring the potential product thickness. 3 This sample was also analyzed for methyl tert-butyl ether (MTBE) by EPA Method 8021B. MTBE was not detected.

4 This sample was also analyzed for polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270-SIM. PAHs were not detected. 5 Sampling for first quarter 2005 was postponed until the first week of the second quarter due to inclement weather.

N Associated MS and /or MSD recovery result outside established control limits. R Associated MS/MSD RPD outside established control limits.

2n Result confirmed by second analysis.

B+ Analyte was detected in the associated method blank as well as in the sample.

J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. MO Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Z2 Analyte present in the associated method blank above the detection limit.

□ **ppendice** □

Appendix

Summary of Remediation and Remedial Action

Summary of Previous Site Investigations and Remedial Activities

1989 Subsurface Investigation and UST Removal

In March 1989, GeoEngineers conducted exploration and contaminated soil and storage tank removal activities at the Site which included the following;

- Installed five groundwater monitoring wells and collected soil samples from the borings at depths ranging from 3.5 to 8.5 feet bgs. Soil sample MW-3 contained Total Petroleum Hydrocarbons (TPH) above reporting limits and TPH as diesel (TPH-D) above MTCA Method A cleanup levels. Free phase product was also witnessed in MW-3.
- Collected one soil sample from a hand auger boring. All analyzed constituents were below MTCA Method A levels.
- Collected groundwater samples from the five monitoring wells. All analyzed constituents were below MTCA Method A levels.
- Removed the underground heating oil tank in close proximity to MW-3 and approximately 90 cubic yards of contaminated soil.
- Excavated five test pits in the vicinity of the heating oil tank excavation. Soil samples collected from the test pits had detections of TPH and TPH-D above reporting limits.

More information can be found in GeoEngineers' *Report of Geotechnical Services* dated August 25, 1989.

1997 Site Assessment

In October 1997, Pacific Environmental Group Inc. (Pacific) conducted a subsurface assessment of soil contamination at the Site. Five soil borings were advanced to depths of 9 to 11 feet bgs and four soil borings were advanced using a hand auger to a depth of 3 feet bgs. All soil samples collected and laboratory analyzed had concentrations of screened constituents that were below detection limits except for HB-4 which had a concentration of TPH-D below the MTCA Method A cleanup level. Groundwater samples were collected from the five deeper soil borings. SB-1 and SB-2 groundwater samples had concentrations of TPH-D above the MTCA Method A cleanup level. More information is available in Pacific's *Summary of Assessment Activities*, dated February 12, 1998.

1999 Additional Site Investigation

In March 1999, GeoEngineers performed additional Site characterization in the vicinity of the 1989 test pit TP-5, located down gradient of the former heating oil tank. One monitoring well was installed and two soil samples were collected from the boring. Laboratory analysis of the soil samples detected concentrations of constituents below MTCA Method A cleanup levels. For more information see GeoEngineers' *Additional Site Characterization*, dated May 25, 1999.

2001 and 2002 Site Delineation Assessment

In April 2001 and October 2002, GeoEngineers completed additional subsurface investigations at the Site. In 2001, eleven soil borings and thirteen soil samples were completed and collected in the vicinity of the former heating oil UST. Samples were collected at depths ranging from 6 to 11 feet bgs. TPH-D was detected at concentrations exceeding the MTCA Method A cleanup level in samples B-1-8.5 and B-10-7.5.

In 2002, two soil borings were advanced and two soil samples collected. P-3 was completed off-Site to the north and P-5 was completed along the northern Site boundary. Both soil samples collected from the borings had concentrations of TPH-D and TPH-O below the MTCA Method A cleanup levels. Additional information can be found in GeoEngineers' *Delineation Assessment Report*, dated January 10, 2003.

2013 Soil Vapor Investigation

In August 2013, ARCADIS oversaw the installation of two soil vapor probes and one groundwater monitoring well. A probe was installed along the eastern Site boundary and in the vicinity of MW-3A and MW-7. Three soil samples were collected from each soil vapor probe borehole. All six soil samples collected from the probe boreholes had concentrations of constituents below the MTCA Method A cleanup levels. In September, ARCADIS sampled the two soil vapor probes. Concentrations of TPH-G, benzene, toluene, ethylbenzene, total xylenes and naphthalene were all below laboratory reporting limits for both vapor samples.

MW-8 was installed along the eastern Site boundary. Three soil samples were collected from the boring at depths of 1, 5 and 9 feet bgs. Concentrations of screened constituents were below MTCA Method A cleanup levels in the three soil samples. More information is available in ARCADIS' *Soil Vapor Investigation Report*, dated December 30, 2013.

2018 Remedial Excavation Activities

On October 2 through 16, 2019, GHD oversaw remedial excavation activities immediately east of the onsite office building in the northeast portion of the property. The excavation was completed to an approximate depth of 14 to 15 feet below grade (fbg) and extended from the eastern edge of the office building to the east approximately 30 to 34 feet, and from the northern property boundary to the south approximately 57 feet. As part of the excavation monitoring well MW-3A was destroyed.

Concentrations of TPHg and TPHd exceeding their respective MTCA Method A screening levels were reported at the excavation extents in southwest, northeast, and western sidewalls and at the excavation base. At the completion of excavation activities approximately 120 pounds of Oxygen Release Compound (ORC) ® was applied to the base of the excavation and the site was restored to its existing condition. At total of 901 tons of petroleum contaminated soil and 8,138 gallons of groundwater generated during dewatering activities were transported for offsite disposal.

2019 Post Excavation Assessment Activities

Subsequent to remedial excavation activities, GHD advanced one soil boring (B-12) and five monitoring wells (MW-9 through MW-13) to evaluate the post remedial excavation groundwater conditions and further evaluate left in place soil impacts at the remedial excavation extents and to define the impacted soil and groundwater extents.

Laboratory analytical results of the soil samples collected did not report concentrations of TPHg, TPHd, TPHo, and BTEX above laboratory reporting limits and/or MTCA Method A screening levels with the exception of one soil sample collected from MW-10 at approximately 11 fbg. Sample MW-10-11 had a TPHg concentration of 221 mg/kg. exceeding the MTCA Method A screening level of 30 mg/kg. Monitoring well MW-10 was advanced in the vicinity of former MW-3/3A and the former waste oil tank.

Laboratory analytical results of groundwater samples collected from the monitoring wells indicated detections of TPHd and/or TPHo in samples from MW-10 and MW-11 at concentrations of 4,185 micrograms per liter (ug/L) and 1,830 ug/L, respectively, exceeding the MTCA Method A screening level of 500 ug/L. Monitoring well MW-10 is located within the central portion of the remedial excavation where

soil impacts were left in place at the base of the excavation and MW-11 is located immediately down gradient of the remedial excavation.

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STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: A (MW-10)
 DATE COMPLETED: April 3, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.82						
2	GRAVEL							
4	SM-SILTY SAND, with gravel, brown 5/3 10YR, no odor - cobble at 5.0ft BGS	731.82	Bentonite					0.0
6								
8								
10	- slough, gravel at 9.0ft BGS			MW-10-9				
12	SM-SILTY SAND, with gravel, very dark gray 3/1 10YR, saturated, sheen, odor	723.82	Sand Pack Well Screen	MW-10-11				8.2
14								
16	- odor at 15.0ft BGS							12.1
18	SC-CLAYEY SAND, with silt, gray 6/1 10YR	717.82						1.4
18	SM-SILTY SAND, brown 5/3 10YR, no odor	716.82						0.1
20	END OF BOREHOLE @ 20.0ft BGS	714.82						0.0
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS
 Screened interval:
 729.82 to 714.82ft BGS
 5.00 to 20.00ft BGS
 Length: 15ft
 Diameter: 2in
 Slot Size: #10
 Material: PVC
 Sand Pack:
 730.82 to 714.82ft BGS
 4.00 to 20.00ft BGS
 Material: Silica

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: B (MW-9)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE					
				NUMBER	INTERVAL	REC (%)	N' VALUE	PID (ppm)	
	GROUND SURFACE	734.90							
2	GRAVEL								
4	SM-SILTY SAND, brown 5/3 10YR, no odor	732.90	Bentonite					0.0	
6	- no odor at 5.0ft BGS							0.0	
8	- saturated, no odor at 9.0ft BGS			MW-9-7				0.0	
10				MW-9-9				0.0	
12			Sand Pack Well Screen					0.0	
14								0.0	
16	SC-CLAYEY SAND, with silt, gray 6/1 10YR	718.90						0.0	
18	- brown 5/3 10YR, no odor at 19.0ft BGS							0.0	
20	END OF BOREHOLE @ 20.0ft BGS	714.90						0.0	
22			WELL DETAILS Screened interval: 729.90 to 714.90ft BGS 5.00 to 20.00ft BGS Length: 15ft Diameter: 2in Slot Size: #10 Material: PVC Sand Pack: 730.90 to 714.90ft BGS 4.00 to 20.00ft BGS Material: Silica						
24									
26									
28									
30									
32									
34									

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: C (MW-11)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Vac/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.41						
2	GRAVEL							
4	SM-SILTY SAND, with gravel, brown 5/3 10YR, no odor	732.41	Bentonite					0.0
6	- wet, no odor at 5.0ft BGS							0.0
10	SM-SILTY SAND, with gravel, brown 5/3 10YR, no odor	725.41	▽	MW-11-9				0.0
12	SILTY SAND, saturated, no odor	723.41	Sand Pack Well Screen	MW-11-11				0.0
14	SC-CLAYEY SAND, gray 6/1 10YR, no odor	720.41						0.0
16	SC-CLAYEY SAND, gray 6/1 10YR, no odor	718.41						0.0
18	SC-CLAYEY SAND, light brownish gray 6/2 10YR, no odor	716.41						0.0
20	SC-CLAYEY SAND, brown 4/2 10YR, no odor	715.41						0.0
20	END OF BOREHOLE @ 20.0ft BGS	714.41						0.0

WELL DETAILS
 Screened interval:
 729.41 to 714.41ft BGS
 5.00 to 20.00ft BGS
 Length: 15ft
 Diameter: 2in
 Slot Size: #10
 Material: PVC
 Sand Pack:
 730.41 to 714.41ft BGS
 4.00 to 20.00ft BGS
 Material: Silica

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: D (MW-13)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.09						
2	GRAVEL							
4	SM-SILTY SAND, brown 5/3 10YR, no odor	731.09	Bentonite					
6	CL-SILTY CLAY, very soft, brown 5/3 10YR, no odor	729.09						
8	SM-SILTY SAND, brown 5/3 10YR, wet, no odor - saturated at 9.0ft BGS	727.09	▼	MW-13-7				0.0
10	- saturated at 11.0ft BGS			MW-13-9				
12			Sand Pack Well Screen					
14	SM-SILTY SAND, gray 2/1 10YR, wet, no odor	720.09						
16	SC-CLAYEY SAND, gray 6/1 10YR, no odor	718.09						0.0
18	SC-CLAYEY SAND, dark grayish brown 4/2 10YR, no odor	716.09						0.0
20	END OF BOREHOLE @ 20.0ft BGS	714.09						0.0

WELL DETAILS
 Screened interval:
 729.09 to 714.09ft BGS
 5.00 to 20.00ft BGS
 Length: 15ft
 Diameter: 2in
 Slot Size: #10
 Material: PVC
 Sand Pack:
 730.09 to 714.09ft BGS
 4.00 to 20.00ft BGS
 Material: Silica

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▼
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: E (MW-12)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	N' VALUE	PID (ppm)
	GROUND SURFACE	733.53						
2	GRAVEL							
4	SM-SILTY SAND, brown, 5/3 10YR, no odor	731.53	Bentonite					0.0
6	- no odor at 5.0ft BGS							0.0
8	SM-SILTY SAND, brown 5/3 10YR, no odor	726.53	MW-12-7					0.0
10			▽					
12	SM-SILTY SAND, saturated, no odor	722.53	Sand Pack Well Screen	MW-12-11				0.0
14	SC-CLAYEY SAND, with silt, gray 6/1 10YR	719.53						
16	SC-CLAYEY SAND, gray 6/1 10YR, saturated	718.53						0.0
18	SC-CLAYEY SAND, grayish brown 5/2 10YR, no odor	716.53						0.0
20	- Refusal, dark grayish brown 3/2 10YR at 19.0ft BGS END OF BOREHOLE @ 19.0ft BGS	714.53						0.0
22			WELL DETAILS Screened interval: 729.53 to 714.53ft BGS 4.00 to 19.00ft BGS Length: 15ft Diameter: 2in Slot Size: #10 Material: PVC Sand Pack: 730.53 to 714.53ft BGS 3.00 to 19.00ft BGS Material: Silica					
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: F (B-12)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.92						
2	GRAVEL							
4	SM-SILTY SAND, wth gravel, no odor, 5/3 10YR	732.92						0.0
6								0.0
8								
10	SM-SILTY SAND, 5/3 10YR	724.92		← Bentonite	(B-12-10)			0.0
12								
14								
16	SC-CLAYEY SAND, gray 6/1 10YR, no odor	718.92			(B-12-16)			0.0
18	SC-CLAYEY SAND, dark grayish brown 4/2 10YR, no odor	716.92						0.0
20	- brown clay seam 5/3 10YR at 20.0ft BGS END OF BOREHOLE @ 20.0ft BGS	714.92						0.0
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 7/4/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: A (MW-10)
 DATE COMPLETED: April 3, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	N' VALUE	PID (ppm)
	GROUND SURFACE	734.82						
2	GP-GRAVEL (Fill Material)							0.0
4	SM-SILTY SAND, with gravel, brown, no odor - cobble at 5.0ft BGS	731.82						
6								
8								
10	- slough, gravel at 9.0ft BGS				MW-10-9			
12	SM-SILTY SAND, with gravel, very dark gray, saturated, sheen, odor	723.82			MW-10-11			8.2
14								
16	- odor at 15.0ft BGS							12.1
18	SC-CLAYEY SAND, with silt, gray	717.82						1.4
18	SM-SILTY SAND, brown, no odor	716.82						0.1
20	END OF BOREHOLE @ 20.0ft BGS	714.82					0.0	
22			WELL DETAILS Screened interval: 729.82 to 714.82ft BGS 5.00 to 20.00ft BGS Length: 15ft Diameter: 2in Slot Size: #10 Material: PVC Sand Pack: 730.82 to 714.82ft BGS 4.00 to 20.00ft BGS Material: Silica					
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: B (MW-9)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.90						
2	GP-GRAVEL (Fill Material)							
4	SM-SILTY SAND, brown, no odor	732.90	Bentonite					0.0
6	- no odor at 5.0ft BGS							0.0
8	- saturated, no odor at 9.0ft BGS		▽	MW-9-7				0.0
10				MW-9-9				
12			Sand Pack Well Screen					0.0
14								0.0
16	SC-CLAYEY SAND, with silt, gray	718.90						0.0
18	- brown, no odor at 19.0ft BGS							0.0
20	END OF BOREHOLE @ 20.0ft BGS	714.90						0.0

WELL DETAILS
 Screened interval:
 729.90 to 714.90ft BGS
 5.00 to 20.00ft BGS
 Length: 15ft
 Diameter: 2in
 Slot Size: #10
 Material: PVC
 Sand Pack:
 730.90 to 714.90ft BGS
 4.00 to 20.00ft BGS
 Material: Silica

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: C (MW-11)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Vac/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.41						
2	GP-GRAVEL (Fill Material)		<p style="margin-top: 10px;">WELL DETAILS Screened interval: 729.41 to 714.41ft BGS 5.00 to 20.00ft BGS Length: 15ft Diameter: 2in Slot Size: #10 Material: PVC Sand Pack: 730.41 to 714.41ft BGS 4.00 to 20.00ft BGS Material: Silica</p>					
4	SM-SILTY SAND, with gravel, brown, no odor	732.41					0.0	
6	- wet, no odor at 5.0ft BGS						0.0	
8								
10	SM-SILTY SAND, with gravel, brown, no odor	725.41		▽	(MW-11-9)		0.0	
12	SM-SILTY SAND, saturated, no odor	723.41			(MW-11-11)		0.0	
14	SC-CLAYEY SAND, gray, no odor	720.41					0.0	
16	SC-CLAYEY SAND, gray, no odor	718.41					0.0	
18	SC-CLAYEY SAND, light brownish gray, no odor	716.41					0.0	
20	SC-CLAYEY SAND, brown, no odor	715.41					0.0	
20	END OF BOREHOLE @ 20.0ft BGS	714.41					0.0	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: D (MW-13)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.09						
2	GP-GRAVEL (Fill Material)		<p style="text-align: right; margin-right: 20px;">Bentonite</p> <p style="text-align: right; margin-right: 20px;">Sand Pack Well Screen</p> <p>WELL DETAILS Screened interval: 729.09 to 714.09ft BGS 5.00 to 20.00ft BGS Length: 15ft Diameter: 2in Slot Size: #10 Material: PVC Sand Pack: 730.09 to 714.09ft BGS 4.00 to 20.00ft BGS Material: Silica</p>					
4	SM-SILTY SAND, brown, no odor	731.09						
6	CL-SILTY CLAY, very soft, brown, no odor	729.09						
8	SM-SILTY SAND, brown, wet, no odor	727.09		▽	(MW-13-7)		0.0	
10	- saturated at 9.0ft BGS				(MW-13-9)			
12	- saturated at 11.0ft BGS							
14	SM-SILTY SAND, gray, wet, no odor	720.09						
16	SC-CLAYEY SAND, gray, no odor	718.09					0.0	
18	SC-CLAYEY SAND, dark grayish brown, no odor	716.09					0.0	
20	END OF BOREHOLE @ 20.0ft BGS	714.09					0.0	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: E (MW-12)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	733.53						
2	GP-GRAVEL (Fill Material)							
4	SM-SILTY SAND, brown, no odor	731.53						0.0
6	- no odor at 5.0ft BGS							0.0
8	SM-SILTY SAND, brown, no odor	726.53		MW-12-7				0.0
12	SM-SILTY SAND, saturated, no odor	722.53		MW-12-11				0.0
14	SC-CLAYEY SAND, with silt, gray	719.53						
16	SC-CLAYEY SAND, gray, saturated	718.53						0.0
18	SC-CLAYEY SAND, grayish brown, no odor	716.53						0.0
20	- Refusal, dark grayish brown at 19.0ft BGS END OF BOREHOLE @ 19.0ft BGS	714.53						0.0

WELL DETAILS
 Screened interval:
 729.53 to 714.53ft BGS
 4.00 to 19.00ft BGS
 Length: 15ft
 Diameter: 2in
 Slot Size: #10
 Material: PVC
 Sand Pack:
 730.53 to 714.53ft BGS
 3.00 to 19.00ft BGS
 Material: Silica

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: P66 511 Lincoln Ave., Sunnyside 977
 PROJECT NUMBER: 11145922
 CLIENT: Phillips 66 Company
 LOCATION: 511 East Lincoln Avenue, Sunnyside, WA

HOLE DESIGNATION: F (B-12)
 DATE COMPLETED: April 4, 2019
 DRILLING METHOD: Air Knife/Direct Push
 FIELD PERSONNEL: B. Pauley

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	GROUND SURFACE	734.92						
2	GP-GRAVEL (Fill Material)							
4	SM-SILTY SAND, wth gravel, brown, no odor	732.92						0.0
6								0.0
8								
10	SM-SILTY SAND, brown	724.92		← Bentonite	(B-12-10)			0.0
12								
14								
16	SC-CLAYEY SAND, gray, no odor	718.92			(B-12-16)			0.0
18	SC-CLAYEY SAND, dark grayish brown, no odor	716.92						0.0
20	- brown clay seam at 20.0ft BGS END OF BOREHOLE @ 20.0ft BGS	714.92						0.0
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 11145922.GPJ CRA_CORP.GDT 8/14/19

Appendix C

Department of Colorado Office of Content
Roundwater Monitoring and Remediation



Notice of Intent to Decommission a Well

Notification Number

This form and required fees **MUST BE RECEIVED** by the Department of Ecology **72 HOURS BEFORE** you construct a well.

AE51411

Submit one completed form for each job site and required fee (check or money order only) to:
Department of Ecology Cashiering Unit, P.O. Box 47611, Olympia, WA 98504-7611

NOTE: Please print. Processing your Notice of Intent may be delayed if all fields are not filled in completely.						
1. Property Owner Ed Ralston - Phillips 66 Company			Phone Number (916) 558-7633			
Mailing Address 76 Broadway		City Sacramento		State CA	Zip Code 95818	
2. Agent (if different from above) GHD Services Inc			Phone Number (253) 302-8281			
Mailing Address 732 Broadway Suite 301		City Tacoma		State WA	Zip Code 98402	
3. Well Location						
Tax Parcel Number, Township, Range, Section, 1/4, and 1/4 1/4 are Required. Latitude and longitude (if available).						
County Name Yakima - 39						
Well Site Street Address 511 E Lincoln Ave.			City Sunnyside		State WA	Zip Code 98944
Tax Parcel Number 22103621464	Township 10N	Range 22E	Section 36	1/4 (within 160 acres) NW	1/4 - 1/4 (within 40 acres) NE	
Latitude Degrees		Latitude Time min sec		Horizontal Collection Method		
Longitude Degrees		Longitude Time min sec				
4. Notice of Intent Number of well being decommissioned			Unique Well Tag Number of well being decommissioned (if applicable)			
5. Well Type to Decommission						
Environmental Protection Well - No Fee				How Many?		1
6. Estimated Decommission Start Date 10/5/2018			Project Name Unocal Bulk Plant 0766			
7. Professional's License Number 42517						
8. Well Drilling Company Name					Phone Number	
9. Well Driller Name Patrick Tortora (971) 925-3751					Driller License Number	

10. Send the entire form.

Please copy the notification number (located in the upper and lower right corners) and keep in a safe place. Use this reference number when communicating with the Department of Ecology.

Water Well : \$50.00
 Soil Sampling, Dewatering,
 Environmental investigation wells: No Fee
 All other wells: \$20.00 each
 Amount Enclosed \$ \$0.00

This notification number must be provided to your driller:

AE51411

Your validation will be sent to the e-mail address you provided: matthew.davis@ghd.com

Instructions

- Item 1: Property owner's name, daytime phone number and mailing address.
- Item 2: Agent - If the driller, consultant or other person is acting as your agent and is submitting the notification fee, please provide their name, mailing address and daytime phone number
- Item 3: Complete county name and code number from drop down list. If the site street address is available, please fill in the complete address here. Include city and zip code. Please enter the tax parcel number if available. NOTE: Include all dashes and zeros. Please provide the Township, Range, Section, where the well is located. This information can be found in your property legal description or the County Assessor's Office
- Item 4: Please enter the original construction notice of intent number if available.
- Item 5: Type of well to decommission. Please note those wells that require a fee and those that do not.
- Item 6: Enter the approximate decommissioning start date.
- Item 7-11: This information should be available from your well driller.

For Assistance

Contact the Department of Ecology Regional Office where the well is located.

Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima counties contact:

Central Regional Office (CRO) (509) 575-2490 TTY 711 and 1-800-833-6388

Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman counties contact:

Eastern Regional Office (ERO) (509) 329-3400 TTY 711 and 1-800-833-6388

Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom counties contact:

Northwest Regional Office (NWRO) (425) 649-7000 TTY 711 and 1-800-833-6388

Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum counties contact:

Southwest Regional Office (SWRO) (360) 407-6300 TTY 711 and 1-800-833-6388

ECY 040- 24 To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Appendix
Authoritative Technical Report

April 15, 2019

Matthew Davis
GHD Services Inc.
3600 Port of Tacoma Road
Suite 302
Tacoma, WA 98424

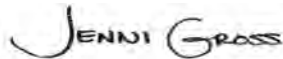
RE: Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

Dear Matthew Davis:

Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Jeffrey Cloud, GHD Services Inc.
Heather Gadwa, GHD
Brian Pauley, GHD Services, Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10469859001	SO-11145922-040419-BP-MW-9-7	Solid	04/04/19 08:45	04/06/19 09:00
10469859002	SO-11145922-040419-BP-MW-9-9	Solid	04/04/19 09:00	04/06/19 09:00
10469859003	SO-11145922-040419-BP-MW-10-9	Solid	04/04/19 09:20	04/06/19 09:00
10469859004	SO-11145922-040419-BP-MW-10-11	Solid	04/04/19 09:40	04/06/19 09:00
10469859005	SO-11145922-040419-BP-MW-11-9	Solid	04/04/19 10:00	04/06/19 09:00
10469859006	SO-11145922-040419-BP-MW-11-11	Solid	04/04/19 10:15	04/06/19 09:00
10469859007	SO-11145922-040419-BP-MW-12-7	Solid	04/04/19 11:15	04/06/19 09:00
10469859008	SO-11145922-040419-BP-MW-12-11	Solid	04/04/19 11:30	04/06/19 09:00
10469859009	SO-11145922-040419-BP-MW-13-7	Solid	04/04/19 12:15	04/06/19 09:00
10469859010	SO-11145922-040419-BP-MW-13-9	Solid	04/04/19 12:20	04/06/19 09:00
10469859011	Trip Blank	Solid	04/04/19 00:00	04/06/19 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10469859001	SO-11145922-040419-BP-MW-9-7	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	GDM	7	PASI-M
10469859002	SO-11145922-040419-BP-MW-9-9	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859003	SO-11145922-040419-BP-MW-10-9	NWTPH-Dx	JVM	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859004	SO-11145922-040419-BP-MW-10-11	NWTPH-Dx	JVM	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859005	SO-11145922-040419-BP-MW-11-9	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859006	SO-11145922-040419-BP-MW-11-11	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859007	SO-11145922-040419-BP-MW-12-7	NWTPH-Dx	JVM	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859008	SO-11145922-040419-BP-MW-12-11	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859009	SO-11145922-040419-BP-MW-13-7	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469859010	SO-11145922-040419-BP-MW-13-9	NWTPH-Dx	ST1	4	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10469859011	Trip Blank	NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		EPA 8260B	CD2	7	PASI-M

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Method: NWTPH-Dx

Description: NWTPH-Dx GCS

Client: GHD Services Inc

Date: April 15, 2019

General Information:

10 samples were analyzed for NWTPH-Dx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 598756

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- SO-11145922-040419-BP-MW-10-11 (Lab ID: 10469859004)
- o-Terphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Method: NWTPH-Gx

Description: NWTPH-Gx GCV

Client: GHD Services Inc

Date: April 15, 2019

General Information:

11 samples were analyzed for NWTPH-Gx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with NWTPH-Gx with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 598940

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 598454

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 3237113)
- TPH as Gas

Additional Comments:

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Method: NWTPH-Gx

Description: NWTPH-Gx GCV

Client: GHD Services Inc

Date: April 15, 2019

Analyte Comments:

QC Batch: 598940

2M: Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

- DUP (Lab ID: 3238600)
 - TPH as Gas
- SO-11145922-040419-BP-MW-9-7 (Lab ID: 10469859001)
 - TPH as Gas

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Method: EPA 8260B

Description: 8260B MSV UST

Client: GHD Services Inc

Date: April 15, 2019

General Information:

11 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 599004

1M: Preserved from glass jar with headspace outside of 48 hours from collection.

- SO-11145922-040419-BP-MW-9-7 (Lab ID: 10469859001)
 - 1,2-Dichloroethane-d4 (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-9-7 **Lab ID:** 10469859001 Collected: 04/04/19 08:45 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<2.7	mg/kg	16.7	2.7	1	04/11/19 13:52	04/12/19 11:15	68334-30-5	
Motor Oil Range	4.8J	mg/kg	11.1	4.8	1	04/11/19 13:52	04/12/19 11:15		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	04/11/19 13:52	04/12/19 11:15	638-68-6	
o-Terphenyl (S)	90	%	50-150		1	04/11/19 13:52	04/12/19 11:15	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.73	mg/kg	5.5	0.73	1	04/11/19 16:58	04/11/19 19:51		2M
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%	50-150		1	04/11/19 16:58	04/11/19 19:51	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	10.9	%	0.10	0.10	1		04/09/19 10:49		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0031	mg/kg	0.022	0.0031	1	04/11/19 16:10	04/12/19 00:03	71-43-2	
Ethylbenzene	<0.0030	mg/kg	0.054	0.0030	1	04/11/19 16:10	04/12/19 00:03	100-41-4	
Toluene	<0.013	mg/kg	0.054	0.013	1	04/11/19 16:10	04/12/19 00:03	108-88-3	
Xylene (Total)	<0.013	mg/kg	0.16	0.013	1	04/11/19 16:10	04/12/19 00:03	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	04/11/19 16:10	04/12/19 00:03	17060-07-0	1M
Toluene-d8 (S)	106	%	75-125		1	04/11/19 16:10	04/12/19 00:03	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	04/11/19 16:10	04/12/19 00:03	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-9-9 **Lab ID:** 10469859002 Collected: 04/04/19 09:00 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.0	mg/kg	18.7	3.0	1	04/11/19 13:52	04/12/19 11:49	68334-30-5	
Motor Oil Range	<5.4	mg/kg	12.5	5.4	1	04/11/19 13:52	04/12/19 11:49		
Surrogates									
n-Triacontane (S)	91	%	50-150		1	04/11/19 13:52	04/12/19 11:49	638-68-6	
o-Terphenyl (S)	101	%	50-150		1	04/11/19 13:52	04/12/19 11:49	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.86	mg/kg	6.5	0.86	1	04/10/19 14:42	04/11/19 15:39		
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	50-150		1	04/10/19 14:42	04/11/19 15:39	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	20.3	%	0.10	0.10	1		04/09/19 10:49		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0037	mg/kg	0.026	0.0037	1	04/10/19 16:08	04/11/19 19:34	71-43-2	
Ethylbenzene	<0.0036	mg/kg	0.065	0.0036	1	04/10/19 16:08	04/11/19 19:34	100-41-4	
Toluene	<0.016	mg/kg	0.065	0.016	1	04/10/19 16:08	04/11/19 19:34	108-88-3	
Xylene (Total)	<0.015	mg/kg	0.20	0.015	1	04/10/19 16:08	04/11/19 19:34	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	04/10/19 16:08	04/11/19 19:34	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 19:34	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	04/10/19 16:08	04/11/19 19:34	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-10-9 **Lab ID:** 10469859003 Collected: 04/04/19 09:20 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	16.8	mg/kg	16.7	2.7	1	04/10/19 14:34	04/11/19 12:15	68334-30-5	
Motor Oil Range	60.7	mg/kg	11.2	4.8	1	04/10/19 14:34	04/11/19 12:15		
Surrogates									
n-Triacontane (S)	75	%	50-150		1	04/10/19 14:34	04/11/19 12:15	638-68-6	
o-Terphenyl (S)	94	%	50-150		1	04/10/19 14:34	04/11/19 12:15	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.91	mg/kg	6.9	0.91	1	04/10/19 14:42	04/11/19 15:56		
Surrogates									
a,a,a-Trifluorotoluene (S)	85	%	50-150		1	04/10/19 14:42	04/11/19 15:56	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	11.3	%	0.10	0.10	1		04/09/19 10:49		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0039	mg/kg	0.028	0.0039	1	04/10/19 16:08	04/11/19 20:13	71-43-2	
Ethylbenzene	<0.0038	mg/kg	0.069	0.0038	1	04/10/19 16:08	04/11/19 20:13	100-41-4	
Toluene	<0.017	mg/kg	0.069	0.017	1	04/10/19 16:08	04/11/19 20:13	108-88-3	
Xylene (Total)	<0.016	mg/kg	0.21	0.016	1	04/10/19 16:08	04/11/19 20:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 20:13	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 20:13	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 20:13	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-10-11 **Lab ID:** 10469859004 Collected: 04/04/19 09:40 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	415	mg/kg	19.9	3.2	1	04/10/19 14:34	04/11/19 12:58	68334-30-5	
Motor Oil Range	24.0	mg/kg	13.3	5.8	1	04/10/19 14:34	04/11/19 12:58		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	04/10/19 14:34	04/11/19 12:58	638-68-6	
o-Terphenyl (S)	161	%	50-150		1	04/10/19 14:34	04/11/19 12:58	84-15-1	S5
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	221	mg/kg	6.7	0.88	1	04/10/19 14:42	04/11/19 16:13		G+
Surrogates									
a,a,a-Trifluorotoluene (S)	81	%	50-150		1	04/10/19 14:42	04/11/19 16:13	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	25.0	%	0.10	0.10	1		04/09/19 10:49		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0038	mg/kg	0.027	0.0038	1	04/10/19 16:08	04/11/19 19:53	71-43-2	
Ethylbenzene	<0.0036	mg/kg	0.067	0.0036	1	04/10/19 16:08	04/11/19 19:53	100-41-4	
Toluene	<0.016	mg/kg	0.067	0.016	1	04/10/19 16:08	04/11/19 19:53	108-88-3	
Xylene (Total)	<0.016	mg/kg	0.20	0.016	1	04/10/19 16:08	04/11/19 19:53	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 19:53	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 19:53	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 19:53	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-11-9 **Lab ID:** 10469859005 Collected: 04/04/19 10:00 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.2	mg/kg	19.6	3.2	1	04/11/19 13:52	04/12/19 12:00	68334-30-5	
Motor Oil Range	<5.7	mg/kg	13.0	5.7	1	04/11/19 13:52	04/12/19 12:00		
Surrogates									
n-Triacontane (S)	97	%	50-150		1	04/11/19 13:52	04/12/19 12:00	638-68-6	
o-Terphenyl (S)	98	%	50-150		1	04/11/19 13:52	04/12/19 12:00	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.89	mg/kg	6.8	0.89	1	04/11/19 16:58	04/11/19 20:24		
Surrogates									
a,a,a-Trifluorotoluene (S)	89	%	50-150		1	04/11/19 16:58	04/11/19 20:24	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.4	%	0.10	0.10	1		04/09/19 10:50		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0038	mg/kg	0.027	0.0038	1	04/10/19 16:08	04/11/19 17:02	71-43-2	
Ethylbenzene	<0.0037	mg/kg	0.068	0.0037	1	04/10/19 16:08	04/11/19 17:02	100-41-4	
Toluene	<0.017	mg/kg	0.068	0.017	1	04/10/19 16:08	04/11/19 17:02	108-88-3	
Xylene (Total)	<0.016	mg/kg	0.20	0.016	1	04/10/19 16:08	04/11/19 17:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 17:02	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 17:02	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 17:02	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-11-11 **Lab ID:** 10469859006 Collected: 04/04/19 10:15 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.1	mg/kg	19.3	3.1	1	04/11/19 13:52	04/12/19 12:11	68334-30-5	
Motor Oil Range	<5.6	mg/kg	12.9	5.6	1	04/11/19 13:52	04/12/19 12:11		
Surrogates									
n-Triacontane (S)	95	%	50-150		1	04/11/19 13:52	04/12/19 12:11	638-68-6	
o-Terphenyl (S)	96	%	50-150		1	04/11/19 13:52	04/12/19 12:11	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.90	mg/kg	6.8	0.90	1	04/11/19 16:58	04/11/19 20:41		
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%	50-150		1	04/11/19 16:58	04/11/19 20:41	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	22.8	%	0.10	0.10	1		04/09/19 10:50		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0038	mg/kg	0.027	0.0038	1	04/10/19 16:08	04/11/19 17:21	71-43-2	
Ethylbenzene	<0.0037	mg/kg	0.068	0.0037	1	04/10/19 16:08	04/11/19 17:21	100-41-4	
Toluene	<0.017	mg/kg	0.068	0.017	1	04/10/19 16:08	04/11/19 17:21	108-88-3	
Xylene (Total)	<0.016	mg/kg	0.20	0.016	1	04/10/19 16:08	04/11/19 17:21	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 17:21	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 17:21	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 17:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-12-7 **Lab ID:** 10469859007 Collected: 04/04/19 11:15 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.3	mg/kg	20.3	3.3	1	04/10/19 14:34	04/11/19 13:09	68334-30-5	
Motor Oil Range	18.1	mg/kg	13.5	5.9	1	04/10/19 14:34	04/11/19 13:09		
Surrogates									
n-Triacontane (S)	75	%	50-150		1	04/10/19 14:34	04/11/19 13:09	638-68-6	
o-Terphenyl (S)	91	%	50-150		1	04/10/19 14:34	04/11/19 13:09	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<1.3	mg/kg	9.9	1.3	1	04/11/19 16:58	04/11/19 20:58		
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%	50-150		1	04/11/19 16:58	04/11/19 20:58	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	26.1	%	0.10	0.10	1		04/09/19 10:50		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0056	mg/kg	0.040	0.0056	1	04/10/19 16:08	04/11/19 17:40	71-43-2	
Ethylbenzene	<0.0054	mg/kg	0.099	0.0054	1	04/10/19 16:08	04/11/19 17:40	100-41-4	
Toluene	<0.024	mg/kg	0.099	0.024	1	04/10/19 16:08	04/11/19 17:40	108-88-3	
Xylene (Total)	<0.023	mg/kg	0.30	0.023	1	04/10/19 16:08	04/11/19 17:40	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 17:40	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 17:40	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 17:40	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-12-11 **Lab ID:** 10469859008 Collected: 04/04/19 11:30 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.2	mg/kg	19.4	3.2	1	04/11/19 13:52	04/12/19 12:23	68334-30-5	
Motor Oil Range	<5.6	mg/kg	13.0	5.6	1	04/11/19 13:52	04/12/19 12:23		
Surrogates									
n-Triacontane (S)	94	%	50-150		1	04/11/19 13:52	04/12/19 12:23	638-68-6	
o-Terphenyl (S)	89	%	50-150		1	04/11/19 13:52	04/12/19 12:23	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.86	mg/kg	6.5	0.86	1	04/11/19 16:58	04/11/19 21:15		
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%	50-150		1	04/11/19 16:58	04/11/19 21:15	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.2	%	0.10	0.10	1		04/09/19 10:50		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0037	mg/kg	0.026	0.0037	1	04/10/19 16:08	04/11/19 17:59	71-43-2	
Ethylbenzene	<0.0035	mg/kg	0.065	0.0035	1	04/10/19 16:08	04/11/19 17:59	100-41-4	
Toluene	<0.016	mg/kg	0.065	0.016	1	04/10/19 16:08	04/11/19 17:59	108-88-3	
Xylene (Total)	<0.015	mg/kg	0.20	0.015	1	04/10/19 16:08	04/11/19 17:59	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	04/10/19 16:08	04/11/19 17:59	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 17:59	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	04/10/19 16:08	04/11/19 17:59	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-13-7 **Lab ID:** 10469859009 Collected: 04/04/19 12:15 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.1	mg/kg	19.1	3.1	1	04/11/19 13:52	04/12/19 12:34	68334-30-5	
Motor Oil Range	<5.5	mg/kg	12.7	5.5	1	04/11/19 13:52	04/12/19 12:34		
Surrogates									
n-Triacontane (S)	95	%	50-150		1	04/11/19 13:52	04/12/19 12:34	638-68-6	
o-Terphenyl (S)	94	%	50-150		1	04/11/19 13:52	04/12/19 12:34	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<1.1	mg/kg	8.1	1.1	1	04/11/19 16:58	04/11/19 23:12		
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	50-150		1	04/11/19 16:58	04/11/19 23:12	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	21.8	%	0.10	0.10	1		04/09/19 10:50		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0046	mg/kg	0.033	0.0046	1	04/10/19 16:08	04/11/19 18:18	71-43-2	
Ethylbenzene	<0.0044	mg/kg	0.081	0.0044	1	04/10/19 16:08	04/11/19 18:18	100-41-4	
Toluene	<0.020	mg/kg	0.081	0.020	1	04/10/19 16:08	04/11/19 18:18	108-88-3	
Xylene (Total)	<0.019	mg/kg	0.24	0.019	1	04/10/19 16:08	04/11/19 18:18	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 18:18	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	04/10/19 16:08	04/11/19 18:18	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 18:18	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: SO-11145922-040419-BP-
MW-13-9 **Lab ID:** 10469859010 Collected: 04/04/19 12:20 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.4	mg/kg	20.7	3.4	1	04/11/19 13:52	04/12/19 12:45	68334-30-5	
Motor Oil Range	<6.0	mg/kg	13.8	6.0	1	04/11/19 13:52	04/12/19 12:45		
Surrogates									
n-Triacontane (S)	90	%	50-150		1	04/11/19 13:52	04/12/19 12:45	638-68-6	
o-Terphenyl (S)	93	%	50-150		1	04/11/19 13:52	04/12/19 12:45	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<1.1	mg/kg	8.6	1.1	1	04/11/19 16:58	04/11/19 23:29		
Surrogates									
a,a,a-Trifluorotoluene (S)	89	%	50-150		1	04/11/19 16:58	04/11/19 23:29	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	28.8	%	0.10	0.10	1		04/09/19 10:51		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0048	mg/kg	0.034	0.0048	1	04/10/19 16:08	04/11/19 18:37	71-43-2	
Ethylbenzene	<0.0047	mg/kg	0.086	0.0047	1	04/10/19 16:08	04/11/19 18:37	100-41-4	
Toluene	<0.021	mg/kg	0.086	0.021	1	04/10/19 16:08	04/11/19 18:37	108-88-3	
Xylene (Total)	<0.020	mg/kg	0.26	0.020	1	04/10/19 16:08	04/11/19 18:37	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 18:37	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 18:37	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1	04/10/19 16:08	04/11/19 18:37	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Sample: Trip Blank **Lab ID: 10469859011** Collected: 04/04/19 00:00 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.66	mg/kg	5.0	0.66	1	04/11/19 16:58	04/11/19 21:48		
Surrogates									
a,a,a-Trifluorotoluene (S)	86	%	50-150		1	04/11/19 16:58	04/11/19 21:48	98-08-8	
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0028	mg/kg	0.020	0.0028	1	04/10/19 16:08	04/11/19 13:09	71-43-2	
Ethylbenzene	<0.0027	mg/kg	0.050	0.0027	1	04/10/19 16:08	04/11/19 13:09	100-41-4	
Toluene	<0.012	mg/kg	0.050	0.012	1	04/10/19 16:08	04/11/19 13:09	108-88-3	
Xylene (Total)	<0.012	mg/kg	0.15	0.012	1	04/10/19 16:08	04/11/19 13:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%	75-125		1	04/10/19 16:08	04/11/19 13:09	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	04/10/19 16:08	04/11/19 13:09	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	04/10/19 16:08	04/11/19 13:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

QC Batch: 598454 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 10469859002, 10469859003, 10469859004

METHOD BLANK: 3235650 Matrix: Solid
Associated Lab Samples: 10469859002, 10469859003, 10469859004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	2.0J	5.0	0.66	04/10/19 16:58	
a,a,a-Trifluorotoluene (S)	%.	85	50-150		04/10/19 16:58	

METHOD BLANK: 3235651 Matrix: Solid
Associated Lab Samples: 10469859002, 10469859003, 10469859004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/10/19 17:15	
a,a,a-Trifluorotoluene (S)	%.	95	50-150		04/10/19 17:15	

LABORATORY CONTROL SAMPLE & LCSD: 3235652 3235653

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	42.9	48.5	86	97	69-125	12	20	
a,a,a-Trifluorotoluene (S)	%.				87	89	50-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3237114 3237115

Parameter	Units	10469853010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	mg/kg	101	60.1	60.6	168	152	112	84	48-148	10	30	
a,a,a-Trifluorotoluene (S)	%.						90	92	50-150			

SAMPLE DUPLICATE: 3237112

Parameter	Units	10469853007 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	2.1J	3.5J		30	
a,a,a-Trifluorotoluene (S)	%.	101	89			

SAMPLE DUPLICATE: 3237113

Parameter	Units	10469853009 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	57.9	42.2	31	30	D6,G+

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

SAMPLE DUPLICATE: 3237113

Parameter	Units	10469853009 Result	Dup Result	RPD	Max RPD	Qualifiers
a,a,a-Trifluorotoluene (S)	%.	80	92			

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

QC Batch: 598940

Analysis Method: NWTPH-Gx

QC Batch Method: NWTPH-Gx

Analysis Description: NWTPH-Gx Solid GCV

Associated Lab Samples: 10469859001, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010, 10469859011

METHOD BLANK: 3238085

Matrix: Solid

Associated Lab Samples: 10469859001, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010, 10469859011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/11/19 18:27	
a,a,a-Trifluorotoluene (S)	%.	91	50-150		04/11/19 18:27	

METHOD BLANK: 3238086

Matrix: Solid

Associated Lab Samples: 10469859001, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010, 10469859011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/11/19 18:44	
a,a,a-Trifluorotoluene (S)	%.	86	50-150		04/11/19 18:44	

LABORATORY CONTROL SAMPLE & LCSD: 3238087

3238088

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	45.6	43.2	91	86	69-125	5	20	
a,a,a-Trifluorotoluene (S)	%.				93	86	50-150			

SAMPLE DUPLICATE: 3238600

Parameter	Units	10469859001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	<0.73	<0.71		30	2M
a,a,a-Trifluorotoluene (S)	%.	92	93			

SAMPLE DUPLICATE: 3238601

Parameter	Units	10469860001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	ND	<0.71		30	
a,a,a-Trifluorotoluene (S)	%.	97	92			

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

QC Batch: 598363

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10469859001, 10469859002, 10469859003, 10469859004, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010

SAMPLE DUPLICATE: 3235167

Parameter	Units	10469853008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.8	15.8	14	30	

SAMPLE DUPLICATE: 3235168

Parameter	Units	10469906002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.8	18.6	1	30	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

QC Batch: 598761 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10469859002, 10469859003, 10469859004, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010, 10469859011

METHOD BLANK: 3237050 Matrix: Solid
Associated Lab Samples: 10469859002, 10469859003, 10469859004, 10469859005, 10469859006, 10469859007, 10469859008, 10469859009, 10469859010, 10469859011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	mg/kg	<0.0028	0.020	0.0028	04/11/19 00:09	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	04/11/19 00:09	
Toluene	mg/kg	<0.012	0.050	0.012	04/11/19 00:09	
Xylene (Total)	mg/kg	<0.012	0.15	0.012	04/11/19 00:09	
1,2-Dichloroethane-d4 (S)	%	98	75-125		04/11/19 00:09	
4-Bromofluorobenzene (S)	%	97	75-125		04/11/19 00:09	
Toluene-d8 (S)	%	98	75-125		04/11/19 00:09	

LABORATORY CONTROL SAMPLE: 3237051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	1	0.70	70	48-125	
Ethylbenzene	mg/kg	1	0.80	80	51-125	
Toluene	mg/kg	1	0.76	76	51-125	
Xylene (Total)	mg/kg	3	2.4	78	52-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3237052 3237053

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10470282001 Result	Spike Conc.	Spike Conc.	Result						
Benzene	mg/kg	<20.6 ug/kg	1.2	1.1	0.88	0.98	76	88	63-136	11	30
Ethylbenzene	mg/kg	<51.6 ug/kg	1.2	1.1	1.0	1.1	87	97	64-142	7	30
Toluene	mg/kg	<51.6 ug/kg	1.2	1.1	0.97	1.1	84	95	61-141	8	30
Xylene (Total)	mg/kg	<155 ug/kg	3.5	3.3	3.0	3.3	86	98	67-145	9	30
1,2-Dichloroethane-d4 (S)	%						97	96	75-125		
4-Bromofluorobenzene (S)	%						99	98	75-125		
Toluene-d8 (S)	%						100	100	75-125		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

QC Batch: 599004 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10469859001

METHOD BLANK: 3238290 Matrix: Solid
Associated Lab Samples: 10469859001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	mg/kg	<0.0028	0.020	0.0028	04/11/19 22:33	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	04/11/19 22:33	
Toluene	mg/kg	<0.012	0.050	0.012	04/11/19 22:33	
Xylene (Total)	mg/kg	<0.012	0.15	0.012	04/11/19 22:33	
1,2-Dichloroethane-d4 (S)	%	109	75-125		04/11/19 22:33	
4-Bromofluorobenzene (S)	%	101	75-125		04/11/19 22:33	
Toluene-d8 (S)	%	107	75-125		04/11/19 22:33	

LABORATORY CONTROL SAMPLE: 3238291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	1	0.52	52	48-125	
Ethylbenzene	mg/kg	1	0.63	63	51-125	
Toluene	mg/kg	1	0.59	59	51-125	
Xylene (Total)	mg/kg	3	1.9	63	52-125	
1,2-Dichloroethane-d4 (S)	%			106	75-125	
4-Bromofluorobenzene (S)	%			98	75-125	
Toluene-d8 (S)	%			107	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238292 3238293

Parameter	Units	10470421001		3238293		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Benzene	mg/kg	ND	1	0.98	0.95	92	75	63-136	24	30	
Ethylbenzene	mg/kg	ND	1	0.98	1.2	96	96	64-142	23	30	
Toluene	mg/kg	ND	1	0.98	1.1	103	84	61-141	25	30	
Xylene (Total)	mg/kg	ND	3.1	3	3.7	120	98	67-145	24	30	
1,2-Dichloroethane-d4 (S)	%					101	98	75-125			
4-Bromofluorobenzene (S)	%					103	106	75-125			
Toluene-d8 (S)	%					104	106	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

QC Batch: 598756 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3550 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 10469859003, 10469859004, 10469859007

METHOD BLANK: 3237012 Matrix: Solid
Associated Lab Samples: 10469859003, 10469859004, 10469859007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Fuel Range	mg/kg	<2.4	15.0	2.4	04/11/19 10:03	
Motor Oil Range	mg/kg	<4.3	10.0	4.3	04/11/19 10:03	
n-Triacontane (S)	%.	81	50-150		04/11/19 10:03	
o-Terphenyl (S)	%.	89	50-150		04/11/19 10:03	

LABORATORY CONTROL SAMPLE: 3237013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel Range	mg/kg	50	43.3	87	50-150	
Motor Oil Range	mg/kg	50	47.7	95	50-150	
n-Triacontane (S)	%.			97	50-150	
o-Terphenyl (S)	%.			94	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3237014 3237015

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10469859003 Result	Spike Conc.	Spike Conc.	MS Result						
Diesel Fuel Range	mg/kg	16.8	54.3	55.2	67.3	61.9	93	82	50-150	8	30
Motor Oil Range	mg/kg	60.7	54.3	55.2	118	114	106	97	50-150	3	30
n-Triacontane (S)	%.						91	80	50-150		
o-Terphenyl (S)	%.						92	92	50-150		

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

QC Batch: 598967 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3550 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 10469859001, 10469859002, 10469859005, 10469859006, 10469859008, 10469859009, 10469859010

METHOD BLANK: 3238154 Matrix: Solid
Associated Lab Samples: 10469859001, 10469859002, 10469859005, 10469859006, 10469859008, 10469859009, 10469859010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Fuel Range	mg/kg	<2.4	15.0	2.4	04/12/19 10:52	
Motor Oil Range	mg/kg	<4.3	10.0	4.3	04/12/19 10:52	
n-Triacontane (S)	%.	89	50-150		04/12/19 10:52	
o-Terphenyl (S)	%.	95	50-150		04/12/19 10:52	

LABORATORY CONTROL SAMPLE: 3238155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel Range	mg/kg	50	47.2	94	50-150	
Motor Oil Range	mg/kg	50	48.7	97	50-150	
n-Triacontane (S)	%.			106	50-150	
o-Terphenyl (S)	%.			98	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238156 3238157

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10469859001 Result	Spike Conc.	Spike Conc.	Result						
Diesel Fuel Range	mg/kg	<2.7	56	55.6	52.8	51.4	90	88	50-150	3	30
Motor Oil Range	mg/kg	4.8J	56	55.6	60.4	59.8	99	99	50-150	1	30
n-Triacontane (S)	%.						92	88	50-150		
o-Terphenyl (S)	%.						90	89	50-150		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 599062

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M Preserved from glass jar with headspace outside of 48 hours from collection.

2M Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

G+ Late peaks present outside the GRO window.

S5 Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

REPORT OF LABORATORY ANALYSIS

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METHOD CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV UST	Solid	SW-846 8260B	SW-846 5035A

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside
Pace Project No.: 10469859

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10469859001	SO-11145922-040419-BP-MW-9-7	EPA 3550	598967	NWTPH-Dx	599154
10469859002	SO-11145922-040419-BP-MW-9-9	EPA 3550	598967	NWTPH-Dx	599154
10469859003	SO-11145922-040419-BP-MW-10-9	EPA 3550	598756	NWTPH-Dx	598939
10469859004	SO-11145922-040419-BP-MW-10-11	EPA 3550	598756	NWTPH-Dx	598939
10469859005	SO-11145922-040419-BP-MW-11-9	EPA 3550	598967	NWTPH-Dx	599154
10469859006	SO-11145922-040419-BP-MW-11-11	EPA 3550	598967	NWTPH-Dx	599154
10469859007	SO-11145922-040419-BP-MW-12-7	EPA 3550	598756	NWTPH-Dx	598939
10469859008	SO-11145922-040419-BP-MW-12-11	EPA 3550	598967	NWTPH-Dx	599154
10469859009	SO-11145922-040419-BP-MW-13-7	EPA 3550	598967	NWTPH-Dx	599154
10469859010	SO-11145922-040419-BP-MW-13-9	EPA 3550	598967	NWTPH-Dx	599154
10469859001	SO-11145922-040419-BP-MW-9-7	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859002	SO-11145922-040419-BP-MW-9-9	NWTPH-Gx	598454	NWTPH-Gx	598783
10469859003	SO-11145922-040419-BP-MW-10-9	NWTPH-Gx	598454	NWTPH-Gx	598783
10469859004	SO-11145922-040419-BP-MW-10-11	NWTPH-Gx	598454	NWTPH-Gx	598783
10469859005	SO-11145922-040419-BP-MW-11-9	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859006	SO-11145922-040419-BP-MW-11-11	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859007	SO-11145922-040419-BP-MW-12-7	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859008	SO-11145922-040419-BP-MW-12-11	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859009	SO-11145922-040419-BP-MW-13-7	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859010	SO-11145922-040419-BP-MW-13-9	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859011	Trip Blank	NWTPH-Gx	598940	NWTPH-Gx	599062
10469859001	SO-11145922-040419-BP-MW-9-7	ASTM D2974	598363		
10469859002	SO-11145922-040419-BP-MW-9-9	ASTM D2974	598363		
10469859003	SO-11145922-040419-BP-MW-10-9	ASTM D2974	598363		
10469859004	SO-11145922-040419-BP-MW-10-11	ASTM D2974	598363		
10469859005	SO-11145922-040419-BP-MW-11-9	ASTM D2974	598363		
10469859006	SO-11145922-040419-BP-MW-11-11	ASTM D2974	598363		
10469859007	SO-11145922-040419-BP-MW-12-7	ASTM D2974	598363		
10469859008	SO-11145922-040419-BP-MW-12-11	ASTM D2974	598363		
10469859009	SO-11145922-040419-BP-MW-13-7	ASTM D2974	598363		
10469859010	SO-11145922-040419-BP-MW-13-9	ASTM D2974	598363		
10469859001	SO-11145922-040419-BP-MW-9-7	EPA 5035/5030B	599004	EPA 8260B	599055
10469859002	SO-11145922-040419-BP-MW-9-9	EPA 5035/5030B	598761	EPA 8260B	598799
10469859003	SO-11145922-040419-BP-MW-10-9	EPA 5035/5030B	598761	EPA 8260B	598799
10469859004	SO-11145922-040419-BP-MW-10-11	EPA 5035/5030B	598761	EPA 8260B	598799
10469859005	SO-11145922-040419-BP-MW-11-9	EPA 5035/5030B	598761	EPA 8260B	598799

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469859

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10469859006	SO-11145922-040419-BP-MW-11-11	EPA 5035/5030B	598761	EPA 8260B	598799
10469859007	SO-11145922-040419-BP-MW-12-7	EPA 5035/5030B	598761	EPA 8260B	598799
10469859008	SO-11145922-040419-BP-MW-12-11	EPA 5035/5030B	598761	EPA 8260B	598799
10469859009	SO-11145922-040419-BP-MW-13-7	EPA 5035/5030B	598761	EPA 8260B	598799
10469859010	SO-11145922-040419-BP-MW-13-9	EPA 5035/5030B	598761	EPA 8260B	598799
10469859011	Trip Blank	EPA 5035/5030B	598761	EPA 8260B	598799

REPORT OF LABORATORY ANALYSIS

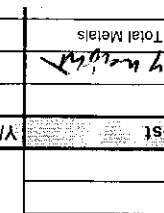
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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analytes Test	Y/N	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	TEMP in C	Received on	Custody (Y/N)	Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
			START DATE	END DATE																	
1	SO-11145922-040419-BP-MW-9-7		2019	2019			HNO3 H2SO4 Unpreserved	NMT-PH-GX NMT-TH-DX 6010/7400 RCRA8 Total Metals	X	4/4	0845		4/6/19	0900	Y	4.5					
2	SO-11145922-040419-BP-MW-9-7		4/4	7/4	0845	0900			X												
3	SO-11145922-040419-BP-MW-10-9		0920	0920	0920	0920			X												
4	SO-11145922-040419-BP-MW-10-11		0940	0940	0940	1000			X												
5	SO-11145922-040419-BP-MW-11-9		1000	1015	1015	1015			X												
6	SO-11145922-040419-BP-MW-11-11		1115	1115	1115	1115			X												
7	SO-11145922-040419-BP-MW-12-7		1130	1130	1130	1130			X												
8	SO-11145922-040419-BP-MW-12-11		1215	1215	1215	1215			X												
9	SO-11145922-040419-BP-MW-13-7		1220	1220	1220	1220			X												
10	SO-11145922-040419-BP-MW-13-9								X												
11	trap blank								X												
12									X												

WO#: 10469859



10469859

Sample Condition Upon Receipt **Client Name:** GHD Services **Project #:** **WO# : 10469859**
Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exception

Tracking Number: 7475 9397 5620
Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No **Biological Tissue Frozen?** Yes No N/A
Packing Material: Bubble Wrap Bubble Bags None Other: PB **Temp Blank?** Yes No
Thermometer: T1(0461) T2(1336) T3(0459) **Type of Ice:** Wet Blue None Dry Melted
 T4(0254) T5(0048)

Note: Each West Virginia Sample must have temp taken (no temp blanks)
 Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C **Average Corrected Temp (no temp blank only):** 4.5 °C See Exceptions
Correction Factor: 10.1 **Cooler Temp Corrected w/temp blank:** _____ °C

USDA Regulated Soil: (N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** CG 4/6/19
 Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No
If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. If no, write ID/ Date/Time on Container Below: See Exception <input type="checkbox"/>
Is sufficient information available to reconcile the samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other		
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample # <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate Positive for Res. <input type="checkbox"/> Yes See Exception <input type="checkbox"/> Chlorine? <input type="checkbox"/> No See Exception <input type="checkbox"/>
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. See Exception <input type="checkbox"/>
Trip Blank Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Pace Trip Blank Lot # (if purchased): <u>N/A 123118-3021193</u>
Trip Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** Yes No
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: _____ **Date:** 04/08/19
 Note: Whenever there is a discrepancy affecting No _____ **JENNI GROSS** _____
 hold, incorrect preservative, out of temp, incorrect containers). _____
 ance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of



Document Name:
SCUR Exception Form – Coolers Above 6°C

Document Revised: 04Feb2019
 Page 1 of 1

Document No.:
F-MN-C-298-Rev.01

Issuing Authority:
 Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions:

Workorder #: 10469859

Out of Temp Sample IDs	Container Type	# of Containers	PM Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No																		
			If yes, indicate who was contacted/date/time. If no, indicate reason why.																		
			Multiple Cooler Project? <input type="checkbox"/> Yes <input type="checkbox"/> No If you answered yes, fill out information to the left.																		
			<table border="1"> <thead> <tr> <th colspan="3">No Temp Blank</th> </tr> <tr> <th>Read Temp</th> <th>Corrected Temp</th> <th>Average Temp</th> </tr> </thead> <tbody> <tr> <td>5.0</td> <td>5.1</td> <td>4.5</td> </tr> <tr> <td>3.9</td> <td>4.0</td> <td></td> </tr> <tr> <td>4.6</td> <td>4.7</td> <td></td> </tr> <tr> <td>4.2</td> <td>4.3</td> <td></td> </tr> </tbody> </table>	No Temp Blank			Read Temp	Corrected Temp	Average Temp	5.0	5.1	4.5	3.9	4.0		4.6	4.7		4.2	4.3	
No Temp Blank																					
Read Temp	Corrected Temp	Average Temp																			
5.0	5.1	4.5																			
3.9	4.0																				
4.6	4.7																				
4.2	4.3																				

Other Issues

Issue Type:	Container Type	# of Containers
Sample ID		

Tracking Number

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition? <input type="checkbox"/> Yes <input type="checkbox"/> No	Initials
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	

April 16, 2019

Matthew Davis
GHD Services Inc.
3600 Port of Tacoma Road
Suite 302
Tacoma, WA 98424

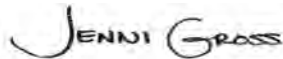
RE: Project: 11145922 P66 Sunnyside
Pace Project No.: 10469861

Dear Matthew Davis:

Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Jeffrey Cloud, GHD Services Inc.
Heather Gadwa, GHD
Brian Pauley, GHD Services, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10469861001	SO-11145922-040419-BP-B-12-10	Solid	04/04/19 14:20	04/06/19 09:00
10469861002	SO-11145922-040419-BP-B-12-16	Solid	04/04/19 14:20	04/06/19 09:00
10469861003	Trip Blank	Solid	04/04/19 00:00	04/06/19 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10469861001	SO-11145922-040419-BP-B-12-10	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469861002	SO-11145922-040419-BP-B-12-16	NWTPH-Dx	ST1	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	7	PASI-M
10469861003	Trip Blank	NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	GDM	7	PASI-M

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Method: NWTPH-Dx

Description: NWTPH-Dx GCS

Client: GHD Services Inc

Date: April 16, 2019

General Information:

2 samples were analyzed for NWTPH-Dx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Method: NWTPH-Gx

Description: NWTPH-Gx GCV

Client: GHD Services Inc

Date: April 16, 2019

General Information:

3 samples were analyzed for NWTPH-Gx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with NWTPH-Gx with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 598940

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 598940

1M: Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

- DUP (Lab ID: 3238600)
- TPH as Gas

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Method: EPA 8260B

Description: 8260B MSV 5030 Med Level

Client: GHD Services Inc

Date: April 16, 2019

General Information:

1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 598191

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10469879003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3234397)
 - Benzene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3234397)
 - Benzene
 - Ethylbenzene
 - Toluene

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Method: EPA 8260B

Description: 8260B MSV UST

Client: GHD Services Inc

Date: April 16, 2019

General Information:

2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Sample: SO-11145922-040419-BP-B-12-10 **Lab ID:** 10469861001 Collected: 04/04/19 14:20 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.0	mg/kg	18.8	3.0	1	04/11/19 13:52	04/12/19 12:57	68334-30-5	
Motor Oil Range	<5.4	mg/kg	12.5	5.4	1	04/11/19 13:52	04/12/19 12:57		
Surrogates									
n-Triacontane (S)	96	%	50-150		1	04/11/19 13:52	04/12/19 12:57	638-68-6	
o-Terphenyl (S)	93	%	50-150		1	04/11/19 13:52	04/12/19 12:57	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<0.82	mg/kg	6.3	0.82	1	04/11/19 16:58	04/11/19 23:46		
Surrogates									
a,a,a-Trifluorotoluene (S)	83	%	50-150		1	04/11/19 16:58	04/11/19 23:46	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	20.2	%	0.10	0.10	1		04/09/19 10:51		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0035	mg/kg	0.025	0.0035	1	04/10/19 16:08	04/11/19 18:56	71-43-2	
Ethylbenzene	<0.0034	mg/kg	0.063	0.0034	1	04/10/19 16:08	04/11/19 18:56	100-41-4	
Toluene	<0.015	mg/kg	0.063	0.015	1	04/10/19 16:08	04/11/19 18:56	108-88-3	
Xylene (Total)	<0.015	mg/kg	0.19	0.015	1	04/10/19 16:08	04/11/19 18:56	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 18:56	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 18:56	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	04/10/19 16:08	04/11/19 18:56	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Sample: SO-11145922-040419-BP-B-12-16 **Lab ID:** 10469861002 Collected: 04/04/19 14:20 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS									
Analytical Method: NWTPH-Dx Preparation Method: EPA 3550									
Diesel Fuel Range	<3.1	mg/kg	19.3	3.1	1	04/11/19 13:52	04/12/19 13:08	68334-30-5	
Motor Oil Range	<5.6	mg/kg	12.8	5.6	1	04/11/19 13:52	04/12/19 13:08		
Surrogates									
n-Triacontane (S)	98	%	50-150		1	04/11/19 13:52	04/12/19 13:08	638-68-6	
o-Terphenyl (S)	96	%	50-150		1	04/11/19 13:52	04/12/19 13:08	84-15-1	
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	<1.0	mg/kg	7.7	1.0	1	04/11/19 16:58	04/12/19 00:03		G-
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%	50-150		1	04/11/19 16:58	04/12/19 00:03	98-08-8	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	22.8	%	0.10	0.10	1		04/09/19 10:51		
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0044	mg/kg	0.031	0.0044	1	04/10/19 16:08	04/11/19 19:15	71-43-2	
Ethylbenzene	<0.0042	mg/kg	0.077	0.0042	1	04/10/19 16:08	04/11/19 19:15	100-41-4	
Toluene	<0.019	mg/kg	0.077	0.019	1	04/10/19 16:08	04/11/19 19:15	108-88-3	
Xylene (Total)	<0.018	mg/kg	0.23	0.018	1	04/10/19 16:08	04/11/19 19:15	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	04/10/19 16:08	04/11/19 19:15	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 19:15	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	04/10/19 16:08	04/11/19 19:15	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Sample: Trip Blank **Lab ID: 10469861003** Collected: 04/04/19 00:00 Received: 04/06/19 09:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV									
Analytical Method: NWTPH-Gx Preparation Method: NWTPH-Gx									
TPH as Gas	3.0J	mg/kg	5.0	0.66	1	04/15/19 10:50	04/15/19 12:13		
Surrogates									
a,a,a-Trifluorotoluene (S)	108	%	50-150		1	04/15/19 10:50	04/15/19 12:13	98-08-8	
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<0.0028	mg/kg	0.020	0.0028	1	04/08/19 15:17	04/09/19 00:04	71-43-2	
Ethylbenzene	<0.0027	mg/kg	0.050	0.0027	1	04/08/19 15:17	04/09/19 00:04	100-41-4	
Toluene	<0.012	mg/kg	0.050	0.012	1	04/08/19 15:17	04/09/19 00:04	108-88-3	
Xylene (Total)	<0.012	mg/kg	0.15	0.012	1	04/08/19 15:17	04/09/19 00:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	75-125		1	04/08/19 15:17	04/09/19 00:04	17060-07-0	
Toluene-d8 (S)	106	%	75-125		1	04/08/19 15:17	04/09/19 00:04	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-125		1	04/08/19 15:17	04/09/19 00:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 598940

Analysis Method: NWTPH-Gx

QC Batch Method: NWTPH-Gx

Analysis Description: NWTPH-Gx Solid GCV

Associated Lab Samples: 10469861001, 10469861002

METHOD BLANK: 3238085

Matrix: Solid

Associated Lab Samples: 10469861001, 10469861002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/11/19 18:27	
a,a,a-Trifluorotoluene (S)	%.	91	50-150		04/11/19 18:27	

METHOD BLANK: 3238086

Matrix: Solid

Associated Lab Samples: 10469861001, 10469861002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/11/19 18:44	
a,a,a-Trifluorotoluene (S)	%.	86	50-150		04/11/19 18:44	

LABORATORY CONTROL SAMPLE & LCSD: 3238087

3238088

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	45.6	43.2	91	86	69-125	5	20	
a,a,a-Trifluorotoluene (S)	%.				93	86	50-150			

SAMPLE DUPLICATE: 3238600

Parameter	Units	10469859001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	<0.73	<0.71		30	1M
a,a,a-Trifluorotoluene (S)	%.	92	93			

SAMPLE DUPLICATE: 3238601

Parameter	Units	10469860001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	ND	<0.71		30	
a,a,a-Trifluorotoluene (S)	%.	97	92			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 599231

Analysis Method: NWTPH-Gx

QC Batch Method: NWTPH-Gx

Analysis Description: NWTPH-Gx Solid GCV

Associated Lab Samples: 10469861003

METHOD BLANK: 3239705

Matrix: Solid

Associated Lab Samples: 10469861003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH as Gas	mg/kg	<0.66	5.0	0.66	04/15/19 11:56	
a,a,a-Trifluorotoluene (S)	%.	96	50-150		04/15/19 11:56	

LABORATORY CONTROL SAMPLE & LCSD: 3239707

3239708

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	52.6	53.9	105	108	69-125	3	20	
a,a,a-Trifluorotoluene (S)	%.				94	95	50-150			

SAMPLE DUPLICATE: 3241189

Parameter	Units	10470710001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	<0.60	<0.71		30	
a,a,a-Trifluorotoluene (S)	%.	96	94			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 598363

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10469861001, 10469861002

SAMPLE DUPLICATE: 3235167

Parameter	Units	10469853008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.8	15.8	14	30	

SAMPLE DUPLICATE: 3235168

Parameter	Units	10469906002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.8	18.6	1	30	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 598191

Analysis Method: EPA 8260B

QC Batch Method: EPA 5035/5030B

Analysis Description: 8260B MSV 5030 Med Level

Associated Lab Samples: 10469861003

METHOD BLANK: 3234394

Matrix: Solid

Associated Lab Samples: 10469861003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	mg/kg	<0.0028	0.020	0.0028	04/08/19 21:39	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	04/08/19 21:39	
Toluene	mg/kg	<0.012	0.050	0.012	04/08/19 21:39	
Xylene (Total)	mg/kg	<0.012	0.15	0.012	04/08/19 21:39	
1,2-Dichloroethane-d4 (S)	%	109	75-125		04/08/19 21:39	
4-Bromofluorobenzene (S)	%	101	75-125		04/08/19 21:39	
Toluene-d8 (S)	%	107	75-125		04/08/19 21:39	

LABORATORY CONTROL SAMPLE: 3234395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	1	0.78	78	48-125	
Ethylbenzene	mg/kg	1	0.89	89	51-125	
Toluene	mg/kg	1	0.85	85	51-125	
Xylene (Total)	mg/kg	3	2.8	92	52-125	
1,2-Dichloroethane-d4 (S)	%			108	75-125	
4-Bromofluorobenzene (S)	%			103	75-125	
Toluene-d8 (S)	%			107	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3234396 3234397

Parameter	Units	10469879003		3234397		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Benzene	mg/kg	ND	1.1	1.3	1.3	106	60	63-136	51	30 M1,R1
Ethylbenzene	mg/kg	ND	1.1	1.3	1.5	124	68	64-142	55	30 R1
Toluene	mg/kg	ND	1.1	1.3	1.4	116	65	61-141	53	30 R1
Xylene (Total)	mg/kg	ND	3.6	3.8	4.6	127	69	67-145	56	30 RS
1,2-Dichloroethane-d4 (S)	%					105	107	75-125		
4-Bromofluorobenzene (S)	%					101	103	75-125		
Toluene-d8 (S)	%					107	108	75-125		

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 598761 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10469861001, 10469861002

METHOD BLANK: 3237050 Matrix: Solid

Associated Lab Samples: 10469861001, 10469861002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	mg/kg	<0.0028	0.020	0.0028	04/11/19 00:09	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	04/11/19 00:09	
Toluene	mg/kg	<0.012	0.050	0.012	04/11/19 00:09	
Xylene (Total)	mg/kg	<0.012	0.15	0.012	04/11/19 00:09	
1,2-Dichloroethane-d4 (S)	%	98	75-125		04/11/19 00:09	
4-Bromofluorobenzene (S)	%	97	75-125		04/11/19 00:09	
Toluene-d8 (S)	%	98	75-125		04/11/19 00:09	

LABORATORY CONTROL SAMPLE: 3237051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	1	0.70	70	48-125	
Ethylbenzene	mg/kg	1	0.80	80	51-125	
Toluene	mg/kg	1	0.76	76	51-125	
Xylene (Total)	mg/kg	3	2.4	78	52-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3237052 3237053

Parameter	Units	10470282001		3237053		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Benzene	mg/kg	<20.6 ug/kg	1.2	1.1	0.88	0.98	76	88	63-136	11	30
Ethylbenzene	mg/kg	<51.6 ug/kg	1.2	1.1	1.0	1.1	87	97	64-142	7	30
Toluene	mg/kg	<51.6 ug/kg	1.2	1.1	0.97	1.1	84	95	61-141	8	30
Xylene (Total)	mg/kg	<155 ug/kg	3.5	3.3	3.0	3.3	86	98	67-145	9	30
1,2-Dichloroethane-d4 (S)	%						97	96	75-125		
4-Bromofluorobenzene (S)	%						99	98	75-125		
Toluene-d8 (S)	%						100	100	75-125		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

QC Batch: 598967 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3550 Analysis Description: NWTPH-Dx GCS
Associated Lab Samples: 10469861001, 10469861002

METHOD BLANK: 3238154 Matrix: Solid

Associated Lab Samples: 10469861001, 10469861002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Fuel Range	mg/kg	<2.4	15.0	2.4	04/12/19 10:52	
Motor Oil Range	mg/kg	<4.3	10.0	4.3	04/12/19 10:52	
n-Triacontane (S)	%.	89	50-150		04/12/19 10:52	
o-Terphenyl (S)	%.	95	50-150		04/12/19 10:52	

LABORATORY CONTROL SAMPLE: 3238155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel Range	mg/kg	50	47.2	94	50-150	
Motor Oil Range	mg/kg	50	48.7	97	50-150	
n-Triacontane (S)	%.			106	50-150	
o-Terphenyl (S)	%.			98	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238156 3238157

Parameter	Units	10469859001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MSD Result	% Rec	% Rec					
Diesel Fuel Range	mg/kg	<2.7	56	55.6	52.8	51.4	90	88	50-150	3	30		
Motor Oil Range	mg/kg	4.8J	56	55.6	60.4	59.8	99	99	50-150	1	30		
n-Triacontane (S)	%.						92	88	50-150				
o-Terphenyl (S)	%.						90	89	50-150				

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 599062

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

G- Early peaks present outside the GRO window.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

REPORT OF LABORATORY ANALYSIS

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METHOD CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV 5030 Med Level	Solid	SW-846 8260B	SW-846 5030B
8260B MSV UST	Solid	SW-846 8260B	SW-846 5035A

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10469861

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10469861001	SO-11145922-040419-BP-B-12-10	EPA 3550	598967	NWTPH-Dx	599154
10469861002	SO-11145922-040419-BP-B-12-16	EPA 3550	598967	NWTPH-Dx	599154
10469861001	SO-11145922-040419-BP-B-12-10	NWTPH-Gx	598940	NWTPH-Gx	599062
10469861002	SO-11145922-040419-BP-B-12-16	NWTPH-Gx	598940	NWTPH-Gx	599062
10469861003	Trip Blank	NWTPH-Gx	599231	NWTPH-Gx	599518
10469861001	SO-11145922-040419-BP-B-12-10	ASTM D2974	598363		
10469861002	SO-11145922-040419-BP-B-12-16	ASTM D2974	598363		
10469861003	Trip Blank	EPA 5035/5030B	598191	EPA 8260B	598269
10469861001	SO-11145922-040419-BP-B-12-10	EPA 5035/5030B	598761	EPA 8260B	598799
10469861002	SO-11145922-040419-BP-B-12-16	EPA 5035/5030B	598761	EPA 8260B	598799

REPORT OF LABORATORY ANALYSIS


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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: GHD Services	Report To: Matthew Davis, heather.gadwa@ghd.com	Attention: Accounts Payable	Company Name: GHD Services	Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036	Regulatory Agency:
Address: 3600 Port of Tacoma Road, Suite 302	Copy To: brian.pau.ey@ghd.com; jeffrey.cloud@ghd.com	Purchase Order #:	Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036	State / Location:	WA / Sunnyside
Tacoma, WA 98424		Project Name: P66 Sunnyside	Pace Project Manager: jennifer.gross@pacelabs.com		
Email: matthew.davis@ghd.com		Project #: 11145922	Pace Profile #: 39232 / Lines 1 & 2		
Phone: 253-607-6217	Fax:				
Requester Due Date: Standard					

WO# : 10469861



10469861

ITEM #	MATRIX CODE (see valid codes to left)	COLLECTED		SAMPLE TYPE (G=GRAD C=COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	Analyses Test	6010/7400 RCRA8 Total Metals	8260 BTEX	8260 VOC	Residual Chlorine		
		START DATE	END DATE																			
1	8P	4/4 1420	4/4 1420												X	X	X				001	
2	B-12-16	4/4 1420	4/4 1420												X	X	X				002	
3	Trip blank	4/4 1420	4/4 1420												X	X	X				003	
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Brian Pau / GHD	4/15/19	1015	Jennifer Pace	4/15/19	1000	26 Y Y Y
SAMPLER NAME AND SIGNATURE							
PRINT Name of SAMPLER:							
SIGNATURE of SAMPLER:							
DATE Signed:							
TEMP in C							
Received on							
Sealed							
Custody							
Cooler							
Samples Intact							

Sample Condition Upon Receipt

Client Name: GHD Services

Project #: **WO# : 10469861**
 PM: JMG Due Date: 04/22/19
 CLIENT: GHD_WA

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exception

Tracking Number: 7475 9397 5630

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer: T1(0461) T2(1336) T3(0459) T4(0254) T5(0048) Type of Ice: Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: <u>2.5</u> °C	Average Corrected Temp (no temp blank only): <u>2.6</u> °C	See Exceptions <input type="checkbox"/>
Correction Factor: <u>+0.1</u>	Cooler Temp Corrected w/temp blank: <u>2.6</u> °C		

USDA Regulated Soil: (N/A, water sample/Other: _____) Date/Initials of Person Examining Contents: HF 4/6/19
 Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No
 If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: <u>4/6/19</u> See Exception <input type="checkbox"/>
Matrix: <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other		
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No See Exception <input type="checkbox"/>
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. See Exception <input type="checkbox"/>
Trip Blank Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Sharing TB with work 10469860</u>
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): <u>012119-3</u>

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Matt Davis Date/Time: 04/08/19 Field Data Required? Yes No
 Comments/Resolution: Trip blank shared with 10469860, analyze for BTEX/Gx only.

Project Manager Review:

JENNI GROSS Date: 04/08/19
 Note: Whenever there is a discrepancy affecting North Carolina samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

May 15, 2019

Matthew Davis
GHD Services Inc.
1117 Tacoma Avenue South
Tacoma, WA 98402

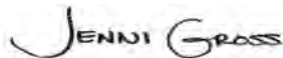
RE: Project: 11145922-2019-03 P66 Sunnyside
Pace Project No.: 10473910

Dear Matthew Davis:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Jeffrey Cloud, GHD Services Inc.
Heather Gadwa, GHD



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #:74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10473910001	MW-9	Water	05/02/19 12:45	05/08/19 09:50
10473910002	MW-10	Water	05/02/19 11:55	05/08/19 09:50
10473910003	MW-11	Water	05/02/19 13:57	05/08/19 09:50
10473910004	MW-12	Water	05/02/19 14:22	05/08/19 09:50
10473910005	MW-13	Water	05/02/19 12:20	05/08/19 09:50
10473910006	DUP-1	Water	05/02/19 12:50	05/08/19 09:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10473910001	MW-9	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	MJD	8	PASI-M
10473910002	MW-10	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	MJD	8	PASI-M
10473910003	MW-11	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	MJD	8	PASI-M
10473910004	MW-12	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	MJD	8	PASI-M
10473910005	MW-13	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AJR	2	PASI-M
		EPA 8260B	MJD	8	PASI-M
10473910006	DUP-1	NWTPH-Dx	EC2	4	PASI-M
		NWTPH-Gx	AMC	2	PASI-M
		EPA 8260B	MJD	8	PASI-M

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Method: NWTPH-Dx

Description: NWTPH-Dx GCS LV

Client: GHD Services Inc

Date: May 15, 2019

General Information:

6 samples were analyzed for NWTPH-Dx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA Mod. 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Method: NWTPH-Gx

Description: NWTPH-Gx GCV

Client: GHD Services Inc

Date: May 15, 2019

General Information:

6 samples were analyzed for NWTPH-Gx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Method: EPA 8260B

Description: 8260B MSV UST

Client: GHD Services Inc

Date: May 15, 2019

General Information:

6 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: MW-9		Lab ID: 10473910001	Collected: 05/02/19 12:45	Received: 05/08/19 09:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	ND	ug/L	400	1	05/09/19 15:09	05/14/19 12:37	68334-30-5	
Motor Oil Range	ND	ug/L	400	1	05/09/19 15:09	05/14/19 12:37		
Surrogates								
o-Terphenyl (S)	89	%.	50-150	1	05/09/19 15:09	05/14/19 12:37	84-15-1	
n-Triacontane (S)	93	%.	50-150	1	05/09/19 15:09	05/14/19 12:37	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	ND	ug/L	100	1		05/09/19 11:10		
Surrogates								
a,a,a-Trifluorotoluene (S)	93	%.	50-150	1		05/09/19 11:10	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 06:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 06:19	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 06:19	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 06:19	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 06:19	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	116	%.	75-125	1		05/09/19 06:19	17060-07-0	
Toluene-d8 (S)	110	%.	75-125	1		05/09/19 06:19	2037-26-5	
4-Bromofluorobenzene (S)	110	%.	75-125	1		05/09/19 06:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: MW-10	Lab ID: 10473910002	Collected: 05/02/19 11:55	Received: 05/08/19 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	3480	ug/L	417	1	05/09/19 15:09	05/14/19 11:51	68334-30-5	
Motor Oil Range	705	ug/L	417	1	05/09/19 15:09	05/14/19 11:51		
Surrogates								
o-Terphenyl (S)	87	%.	50-150	1	05/09/19 15:09	05/14/19 11:51	84-15-1	
n-Triacontane (S)	85	%.	50-150	1	05/09/19 15:09	05/14/19 11:51	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	218	ug/L	100	1		05/09/19 10:36		
Surrogates								
a,a,a-Trifluorotoluene (S)	93	%.	50-150	1		05/09/19 10:36	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 06:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 06:36	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 06:36	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 06:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 06:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%.	75-125	1		05/09/19 06:36	17060-07-0	
Toluene-d8 (S)	111	%.	75-125	1		05/09/19 06:36	2037-26-5	
4-Bromofluorobenzene (S)	114	%.	75-125	1		05/09/19 06:36	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: MW-11	Lab ID: 10473910003	Collected: 05/02/19 13:57	Received: 05/08/19 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	1830	ug/L	426	1	05/09/19 15:09	05/14/19 12:19	68334-30-5	
Motor Oil Range	ND	ug/L	426	1	05/09/19 15:09	05/14/19 12:19		
Surrogates								
o-Terphenyl (S)	94	%.	50-150	1	05/09/19 15:09	05/14/19 12:19	84-15-1	
n-Triacontane (S)	94	%.	50-150	1	05/09/19 15:09	05/14/19 12:19	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	ND	ug/L	100	1		05/09/19 11:27		
Surrogates								
a,a,a-Trifluorotoluene (S)	92	%.	50-150	1		05/09/19 11:27	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 06:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 06:52	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 06:52	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 06:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 06:52	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	116	%.	75-125	1		05/09/19 06:52	17060-07-0	
Toluene-d8 (S)	111	%.	75-125	1		05/09/19 06:52	2037-26-5	
4-Bromofluorobenzene (S)	113	%.	75-125	1		05/09/19 06:52	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: MW-12	Lab ID: 10473910004	Collected: 05/02/19 14:22	Received: 05/08/19 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	ND	ug/L	426	1	05/09/19 15:09	05/14/19 12:28	68334-30-5	
Motor Oil Range	ND	ug/L	426	1	05/09/19 15:09	05/14/19 12:28		
Surrogates								
o-Terphenyl (S)	88	%.	50-150	1	05/09/19 15:09	05/14/19 12:28	84-15-1	
n-Triacontane (S)	89	%.	50-150	1	05/09/19 15:09	05/14/19 12:28	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	ND	ug/L	100	1		05/09/19 12:17		
Surrogates								
a,a,a-Trifluorotoluene (S)	91	%.	50-150	1		05/09/19 12:17	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 07:09	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 07:09	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 07:09	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 07:09	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 07:09	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	116	%.	75-125	1		05/09/19 07:09	17060-07-0	
Toluene-d8 (S)	110	%.	75-125	1		05/09/19 07:09	2037-26-5	
4-Bromofluorobenzene (S)	116	%.	75-125	1		05/09/19 07:09	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: MW-13	Lab ID: 10473910005	Collected: 05/02/19 12:20	Received: 05/08/19 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	ND	ug/L	392	1	05/09/19 15:09	05/14/19 12:00	68334-30-5	
Motor Oil Range	ND	ug/L	392	1	05/09/19 15:09	05/14/19 12:00		
Surrogates								
o-Terphenyl (S)	89	%.	50-150	1	05/09/19 15:09	05/14/19 12:00	84-15-1	
n-Triacontane (S)	92	%.	50-150	1	05/09/19 15:09	05/14/19 12:00	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	ND	ug/L	100	1		05/09/19 14:38		
Surrogates								
a,a,a-Trifluorotoluene (S)	94	%.	50-150	1		05/09/19 14:38	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 07:26	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 07:26	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 07:26	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 07:26	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 07:26	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	117	%.	75-125	1		05/09/19 07:26	17060-07-0	
Toluene-d8 (S)	111	%.	75-125	1		05/09/19 07:26	2037-26-5	
4-Bromofluorobenzene (S)	114	%.	75-125	1		05/09/19 07:26	460-00-4	

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ANALYTICAL RESULTS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Sample: DUP-1	Lab ID: 10473910006	Collected: 05/02/19 12:50	Received: 05/08/19 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV		Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C						
Diesel Fuel Range	ND	ug/L	417	1	05/09/19 15:09	05/14/19 12:10	68334-30-5	
Motor Oil Range	ND	ug/L	417	1	05/09/19 15:09	05/14/19 12:10		
Surrogates								
o-Terphenyl (S)	92	%.	50-150	1	05/09/19 15:09	05/14/19 12:10	84-15-1	
n-Triacontane (S)	94	%.	50-150	1	05/09/19 15:09	05/14/19 12:10	638-68-6	
NWTPH-Gx GCV		Analytical Method: NWTPH-Gx						
TPH as Gas	ND	ug/L	100	1		05/09/19 13:25		
Surrogates								
a,a,a-Trifluorotoluene (S)	95	%.	50-150	1		05/09/19 13:25	98-08-8	
8260B MSV UST		Analytical Method: EPA 8260B						
Benzene	ND	ug/L	1.0	1		05/09/19 07:42	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		05/09/19 07:42	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/09/19 07:42	1634-04-4	
Toluene	ND	ug/L	1.0	1		05/09/19 07:42	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		05/09/19 07:42	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	117	%.	75-125	1		05/09/19 07:42	17060-07-0	
Toluene-d8 (S)	109	%.	75-125	1		05/09/19 07:42	2037-26-5	
4-Bromofluorobenzene (S)	113	%.	75-125	1		05/09/19 07:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

QC Batch: 604738

Analysis Method: NWTPH-Gx

QC Batch Method: NWTPH-Gx

Analysis Description: NWTPH-Gx Water

Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

METHOD BLANK: 3269326

Matrix: Water

Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	05/09/19 10:19	
a,a,a-Trifluorotoluene (S)	%.	94	50-150	05/09/19 10:19	

LABORATORY CONTROL SAMPLE & LCSD: 3269327

3269328

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1200	1080	120	108	75-125	10	20	
a,a,a-Trifluorotoluene (S)	%.				105	106	50-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3269577

3269578

Parameter	Units	10473910004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	ug/L	ND	1000	1000	1110	1150	111	115	75-125	3	30	
a,a,a-Trifluorotoluene (S)	%.						106	108	50-150			

SAMPLE DUPLICATE: 3269576

Parameter	Units	10473910002 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	218	278	24	30	G+
a,a,a-Trifluorotoluene (S)	%.	93	94			

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QUALITY CONTROL DATA

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

QC Batch: 604665 Analysis Method: EPA 8260B
 QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
 Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

METHOD BLANK: 3268846 Matrix: Water
 Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	05/09/19 05:12	
Ethylbenzene	ug/L	ND	1.0	05/09/19 05:12	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/09/19 05:12	
Toluene	ug/L	ND	1.0	05/09/19 05:12	
Xylene (Total)	ug/L	ND	3.0	05/09/19 05:12	
1,2-Dichloroethane-d4 (S)	%	116	75-125	05/09/19 05:12	
4-Bromofluorobenzene (S)	%	114	75-125	05/09/19 05:12	
Toluene-d8 (S)	%	113	75-125	05/09/19 05:12	

LABORATORY CONTROL SAMPLE: 3268847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	10.3	103	75-125	
Ethylbenzene	ug/L	10	11.1	111	75-125	
Methyl-tert-butyl ether	ug/L	10	11.8	118	75-125	
Toluene	ug/L	10	10.2	102	75-125	
Xylene (Total)	ug/L	30	31.7	106	75-125	
1,2-Dichloroethane-d4 (S)	%			116	75-125	
4-Bromofluorobenzene (S)	%			113	75-125	
Toluene-d8 (S)	%			110	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3268848 3268849

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10473463001 Result	Spike Conc.	Spike Conc.	MS Result						
Benzene	ug/L	0.44	10	10	11.4	11.0	110	106	30-150	4	30
Ethylbenzene	ug/L	<0.14	10	10	12.4	11.9	124	119	30-150	5	30
Methyl-tert-butyl ether	ug/L	1.5	10	10	14.3	14.0	129	125	30-150	3	30
Toluene	ug/L	<0.083	10	10	10.9	10.1	109	101	30-150	8	30
Xylene (Total)	ug/L	<0.31	30	30	34.5	33.3	115	111	30-150	4	30
1,2-Dichloroethane-d4 (S)	%						118	119	75-125		
4-Bromofluorobenzene (S)	%						111	112	75-125		
Toluene-d8 (S)	%						112	111	75-125		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

QC Batch: 604827 Analysis Method: NWTPH-Dx
 QC Batch Method: EPA Mod. 3510C Analysis Description: NWTPH-Dx GCS LV
 Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

METHOD BLANK: 3269775 Matrix: Water
 Associated Lab Samples: 10473910001, 10473910002, 10473910003, 10473910004, 10473910005, 10473910006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range	ug/L	ND	400	05/14/19 11:23	
Motor Oil Range	ug/L	ND	400	05/14/19 11:23	
n-Triacontane (S)	%.	84	50-150	05/14/19 11:23	
o-Terphenyl (S)	%.	82	50-150	05/14/19 11:23	

LABORATORY CONTROL SAMPLE & LCSD: 3269776

Parameter	Units	3269777		LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
		Spike Conc.	LCS Result							LCSD Result
Diesel Fuel Range	ug/L	2000	1920	1820	96	91	50-150	5	20	
Motor Oil Range	ug/L	2000	1900	1820	95	91	50-150	5	20	
n-Triacontane (S)	%.				95	84	50-150			
o-Terphenyl (S)	%.				92	81	50-150			

SAMPLE DUPLICATE: 3269778

Parameter	Units	10473910001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range	ug/L	ND	72.6J		30	
Motor Oil Range	ug/L	ND	ND		30	
n-Triacontane (S)	%.	93	85			
o-Terphenyl (S)	%.	89	79			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

WORKORDER QUALIFIERS

WO: 10473910

[1] Samples in this workorder were received in the laboratory without an associated trip blank.

[2] The samples were received outside of required temperature range. Analysis was completed upon client approval.

ANALYTE QUALIFIERS

G+ Late peaks present outside the GRO window.

REPORT OF LABORATORY ANALYSIS

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METHOD CROSS REFERENCE TABLE

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV UST	Water	SW-846 8260B/5030B	N/A

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11145922-2019-03 P66 Sunnyside

Pace Project No.: 10473910

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10473910001	MW-9	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910002	MW-10	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910003	MW-11	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910004	MW-12	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910005	MW-13	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910006	DUP-1	EPA Mod. 3510C	604827	NWTPH-Dx	605798
10473910001	MW-9	NWTPH-Gx	604738		
10473910002	MW-10	NWTPH-Gx	604738		
10473910003	MW-11	NWTPH-Gx	604738		
10473910004	MW-12	NWTPH-Gx	604738		
10473910005	MW-13	NWTPH-Gx	604738		
10473910006	DUP-1	NWTPH-Gx	604738		
10473910001	MW-9	EPA 8260B	604665		
10473910002	MW-10	EPA 8260B	604665		
10473910003	MW-11	EPA 8260B	604665		
10473910004	MW-12	EPA 8260B	604665		
10473910005	MW-13	EPA 8260B	604665		
10473910006	DUP-1	EPA 8260B	604665		

REPORT OF LABORATORY ANALYSIS

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NO#: 10473910



CHAIN-OF-CUSTODY / Analytical Re
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

Section A
 Required Client Information:
 Company: GHD
 Address: 4550 Kruse Way Suite 300
 Lake Oswego, OR 97035
 Email: jeffrey.cloud@ghd.com
 Phone: 971 925 3755
 Requested Due Date: Standard

Section B
 Required Project Information:
 Report To: Jeffrey Cloud
 Copy To:
 Purchase Order #: 11145922-2019-03 P66 Sunnyside
 Project Name:
 Project #:

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 Pace Project Manager: jennifer.gross@pacelabs.com
 Pace Profile #: 39232/2
 State / Location:
 WA / Sunnyside
 Regulatory Agency:

ITEM #	MATRIX	MATRIX CODE (see valid codes to left)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	PRESERVATIVES							Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C	Received on	Custody	Sealed	Cooler	Samples	(Y/N)									
			START DATE	END DATE				H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other																				
1	MW-9	MTG	5-2 1245		6			X							X	X	X	001																
2	MW-10	MTG	5-2 1155		6			X							X	X	X	002																
3	MW-11	MTG	5-2 1357		6			X							X	X	X	003																
4	MW-12	MTG	5-2 1422		6			X							X	X	X	004																
5	MW-13	MTG	5-2 1220		6			X							X	X	X	005																
6	DUP-1	MTG	5-2 1250		6			X							X	X	X	006																
7																																		
8																																		
9																																		
10																																		
11																																		
12																																		

RELINQUISHED BY / AFFILIATION: Patrick H. Blaine Tech
 DATE: 5-3-19 1800
 ACCERTED BY / AFFILIATION: [Signature]
 DATE: 5/3/19 9:50
 SAMPLE CONDITIONS: 001 Y Y Y Y Y Y

ADDITIONAL COMMENTS:
 Relinquished by Blaine Tech
 Relinquished by Blaine Tech
 Relinquished by Blaine Tech

SAMPLER NAME AND SIGNATURE: Patrick H. Blaine Tech
 PRINT Name of SAMPLER: Patrick H. Blaine Tech
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 5-3-19

Sample Condition Upon Receipt

Client Name: GHD Project #: WO# : 10473910

PM: JMG Due Date: 05/15/19
CLIENT: GHD_WA

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exception

Tracking Number: 4426 7790 7403

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer: T1(0461) T2(1336) T3(0459)
 T4(0254) T5(0048) Type of Ice: Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C Cooler Temp Read w/temp blank: -0.1 °C Average Corrected Temp (no temp blank only): See Exceptions

Correction Factor: True Cooler Temp Corrected w/temp blank: -0.1 °C

USDA Regulated Soil: (N/A, water sample/Other: _____) Date/Initials of Person Examining Contents: GND 5/13/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4. <u>LTT</u>
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: <input type="checkbox"/> See Exception
Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other		
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: <u>VOA</u> , Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Positive for Res. Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exception
		pH Paper Lot# <input type="checkbox"/>
		Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> See Exception
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): <u>N/A</u>

CLIENT NOTIFICATION/RESOLUTION EPV 05/08/19 Field Data Required? Yes No

Person Contacted: Jeff / Matt Davis Date/Time: 05/08/19

Comments/Resolution: Proceed with analyses over temperature.

Project Manager Review: _____ Date: 05/08/19

Note: Whenever there is a discrepancy affecting North Carolina samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

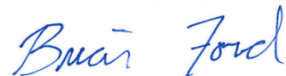
Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW-9	0	2	4	6	Yes
MW-10	0	2	4	6	Yes
MW-11	0	1	5	6	Yes
MW-12	0	3	3	6	Yes
MW-13	0	0	6	6	Yes
DVP-1	0	3	3	6	Yes

GHD - Lynnwood, WA

Sample Delivery Group: L1032688
Samples Received: 10/08/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
S-100618-EM-SP1 L1032688-01	5	
Qc: Quality Control Summary	6	
Total Solids by Method 2540 G-2011	6	
Volatile Organic Compounds (GC) by Method NWTPHGX	7	
Volatile Organic Compounds (GC/MS) by Method 8260B	8	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	9	
Gl: Glossary of Terms	10	
Al: Accreditations & Locations	11	
Sc: Sample Chain of Custody	12	

SAMPLE SUMMARY



S-100618-EM-SP1 L1032688-01 Solid

Collected by: Eric Maisie
 Collected date/time: 10/06/18 12:00
 Received date/time: 10/08/18 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1178033	1	10/09/18 10:41	10/09/18 10:56	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1177755	25	10/06/18 12:00	10/08/18 20:35	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177642	1	10/06/18 12:00	10/08/18 15:59	CAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1177383	5	10/08/18 21:35	10/09/18 10:32	AAT

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	10/09/2018 10:56	WG1178033

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.73	J	0.951	2.80	25	10/08/2018 20:35	WG1177755
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/08/2018 20:35	WG1177755

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000459	J	0.000449	0.00112	1	10/08/2018 15:59	WG1177642
Toluene	U		0.00140	0.00561	1	10/08/2018 15:59	WG1177642
Ethylbenzene	U		0.000595	0.00280	1	10/08/2018 15:59	WG1177642
Total Xylenes	U		0.00536	0.00729	1	10/08/2018 15:59	WG1177642
(S) Toluene-d8	106			75.0-131		10/08/2018 15:59	WG1177642
(S) Dibromofluoromethane	95.7			65.0-129		10/08/2018 15:59	WG1177642
(S) a,a,a-Trifluorotoluene	101			80.0-120		10/08/2018 15:59	WG1177642
(S) 4-Bromofluorobenzene	87.1			67.0-138		10/08/2018 15:59	WG1177642

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	26.6		7.46	22.4	5	10/09/2018 10:32	WG1177383
Residual Range Organics (RRO)	62.0		18.6	56.1	5	10/09/2018 10:32	WG1177383
(S) o-Terphenyl	72.8			18.0-148		10/09/2018 10:32	WG1177383



Method Blank (MB)

(MB) R3349030-1 10/09/18 10:56

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

L1031675-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1031675-01 10/09/18 10:56 • (DUP) R3349030-3 10/09/18 10:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	84.6	84.6	1	0.0259		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3349030-2 10/09/18 10:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3348799-5 10/08/18 16:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3348799-3 10/08/18 15:29 • (LCSD) R3348799-4 10/08/18 15:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.95	5.99	108	109	71.0-124			0.684	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-120				

5 Sr

6 Qc

7 Gl

L1031879-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1031879-04 10/09/18 01:23 • (MS) R3348799-8 10/09/18 06:12 • (MSD) R3348799-9 10/09/18 06:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	232	741	772	92.5	98.2	100	10.0-149			4.14	27
(S) a,a,a-Trifluorotoluene(FID)					106	109		77.0-120				

8 Al

9 Sc

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.



Method Blank (MB)

(MB) R3348664-3 10/08/18 12:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	103			75.0-131
(S) Dibromofluoromethane	91.6			65.0-129
(S) a,a,a-Trifluorotoluene	103			80.0-120
(S) 4-Bromofluorobenzene	92.3			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3348664-1 10/08/18 10:33 • (LCSD) R3348664-2 10/08/18 11:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Benzene	0.125	0.131	0.132	105	106	70.0-123			1.06	20
Ethylbenzene	0.125	0.106	0.104	84.8	83.3	74.0-126			1.75	20
Toluene	0.125	0.106	0.106	84.5	84.7	75.0-121			0.261	20
Xylenes, Total	0.375	0.333	0.337	88.8	89.9	72.0-127			1.19	20
(S) Toluene-d8				104	102	75.0-131				
(S) Dibromofluoromethane				94.8	99.5	65.0-129				
(S) a,a,a-Trifluorotoluene				104	104	80.0-120				
(S) 4-Bromofluorobenzene				86.9	90.1	67.0-138				

L1030925-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1030925-24 10/08/18 18:08 • (MS) R3348664-4 10/08/18 22:10 • (MSD) R3348664-5 10/08/18 22:28

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.215	U	0.201	0.121	93.8	56.5	1	10.0-149		J3	49.7	37
Ethylbenzene	0.215	0.0404	0.228	0.150	87.4	51.3	1	10.0-160		J3	41.0	38
Toluene	0.215	U	0.185	0.110	86.3	51.4	1	10.0-156		J3	50.7	38
Xylenes, Total	0.644	0.105	0.706	0.463	93.3	55.6	1	10.0-160		J3	41.6	38
(S) Toluene-d8					108	108		75.0-131				
(S) Dibromofluoromethane					85.0	88.7		65.0-129				
(S) a,a,a-Trifluorotoluene					179	174		80.0-120	J1	J1		
(S) 4-Bromofluorobenzene					92.0	91.7		67.0-138				



Method Blank (MB)

(MB) R3348884-1 10/09/18 08:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	83.9			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3348884-2 10/09/18 08:58 • (LCSD) R3348884-3 10/09/18 09:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	21.6	21.8	86.4	87.2	50.0-150			0.922	20
Residual Range Organics (RRO)	25.0	17.3	17.9	69.2	71.6	50.0-150			3.41	20
<i>(S) o-Terphenyl</i>				73.1	75.2	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

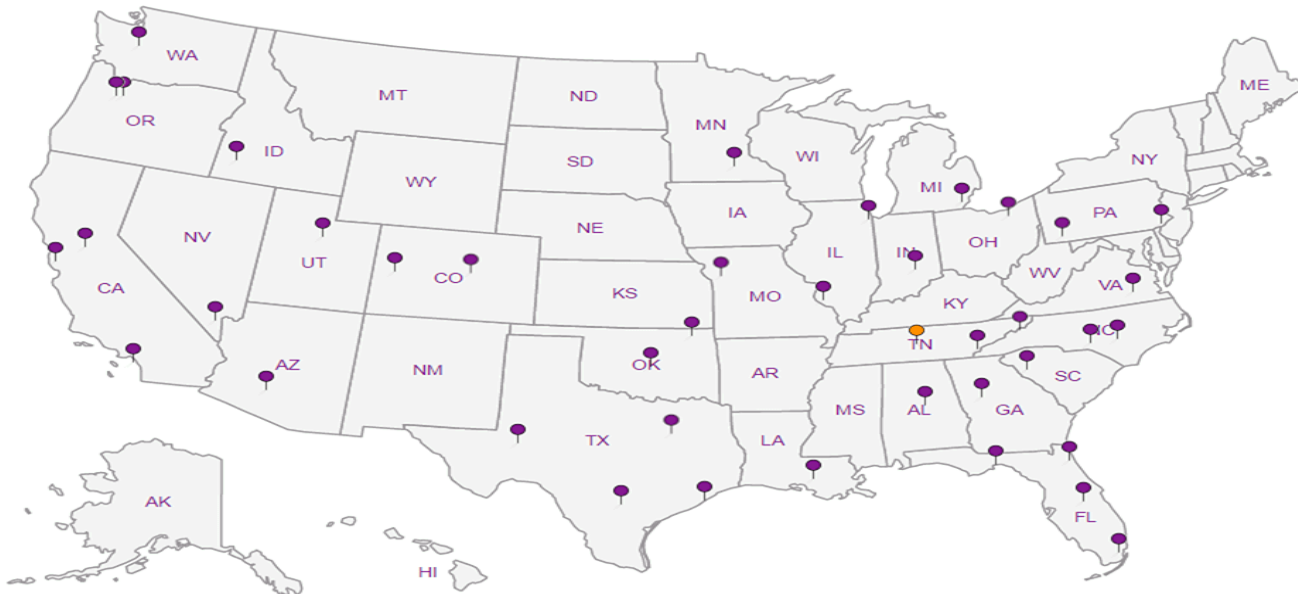
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:
 Company: GHD Services
 Address: 732 Broadway, Suite 301
 Tacoma, WA 98402
 Email: matthew.davis@ghd.com
 Phone: 253-507-6217 Fax:
 Requested Due Date: ~~10 Day~~ ~~30/10/2020~~

Section B
Required Project Information:
 Report To: Matthew Davis
 Copy To: eric.maise@ghd.com; jeffrey.cloud@ghd.com
 Purchase Order #:
 Project Name: P66 Sunnyside
 Project #: 11145922

Section C
Invoice Information:
 Attention: Accounts Payable
 Company Name: GHD Services
 Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036
 Pace Quote:
 Pace Project Manager: jennifer.gross@pacelabs.com,
 Pace Profile #: 39232

Page : Of
 Regulatory Agency
 State / Location
 WA / Sunnyside

RUSH (Day/24 hr)

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / . -) Sample ids must be unique</small>	MATRIX Drinking Water DW Water WT Waste Water WW Product P Of SL CL Wipe WP Air AR Other OT Tissue TS	CODE DW WT WW P SL CL WP AR OT TS	MATRIX CODE (see visit codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Analyzes Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)		
						START	END			Unpreserved	H2SO4	HNO3	HCl	NaOH	NalS2O3	Methanol	Other	Analysis Test	Requested Analysis Filtered (Y/N)						
						DATE	TIME			DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME					DATE	TIME
1	S-100618-EM-SPI	SLC		10/6	1200				5X																L10 32688
2																									RUSH TAT -d1
3																									24 hr
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
RUSH 24 hr AT	Eric Maise	10/6	1230	Jeffery Cloud	10/6	1030	

AND SCREEN: <0.5 mR/hr

SAMPLER NAME AND SIGNATURE: Eric Maise
 PRINT Name of SAMPLER: Eric Maise
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 10/6/18 12:30

TEMP in C: Received on ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact (Y/N)
 1.6025w
 ±0
 1.602 (OK)

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client: PACE TWA	SDG#	L1032688	
Cooler Received/Opened On: 10/8/18	Temperature:	1.6	
Received By: Jeremy Watkins			
Signature:			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

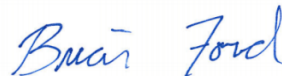
October 10, 2018

GHD - Lynnwood, WA

Sample Delivery Group: L1032834
Samples Received: 10/09/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036










Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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S-100818-EM-TB6-14 L1032834-01 Solid

Collected by
Eric Maise
Collected date/time
10/08/18 13:00
Received date/time
10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1178403	1	10/09/18 16:58	10/09/18 17:01	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1177978	25	10/08/18 13:00	10/09/18 15:03	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1178154	1	10/08/18 13:00	10/09/18 16:40	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1178467	1	10/09/18 15:48	10/09/18 21:56	MTJ

1
Cp

2
Tc

3
Ss

4
Cn

S-100818-EM-SPZ L1032834-02 Solid

Collected by
Eric Maise
Collected date/time
10/08/18 13:30
Received date/time
10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1178155	1	10/09/18 13:10	10/09/18 13:18	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1177978	31.75	10/08/18 13:30	10/09/18 15:27	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1178154	1	10/08/18 13:30	10/09/18 16:58	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1178467	10	10/09/18 15:48	10/09/18 22:21	MTJ

5
Sr

6
Qc

7
Gl

S-100818-EM-6-10 L1032834-03 Solid

Collected by
Eric Maise
Collected date/time
10/08/18 14:00
Received date/time
10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1178155	1	10/09/18 13:10	10/09/18 13:18	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1177978	25	10/08/18 14:00	10/09/18 15:51	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1178154	1	10/08/18 14:00	10/09/18 17:17	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1178467	1	10/09/18 15:48	10/09/18 22:09	MTJ
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1178467	10	10/09/18 15:48	10/09/18 22:34	MTJ

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	70.6		1	10/09/2018 17:01	WG1178403

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	56.3		1.20	3.54	25	10/09/2018 15:03	WG1177978
(S) a,a,a-Trifluorotoluene(FID)	99.8			77.0-120		10/09/2018 15:03	WG1177978

3 Ss

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	0.000810	J	0.000566	0.00142	1	10/09/2018 16:40	WG1178154
Ethylbenzene	0.00118	J	0.000750	0.00354	1	10/09/2018 16:40	WG1178154
Toluene	U		0.00177	0.00708	1	10/09/2018 16:40	WG1178154
Xylenes, Total	U		0.00677	0.00920	1	10/09/2018 16:40	WG1178154
(S) Toluene-d8	104			75.0-131		10/09/2018 16:40	WG1178154
(S) Dibromofluoromethane	95.1			65.0-129		10/09/2018 16:40	WG1178154
(S) 4-Bromofluorobenzene	100			67.0-138		10/09/2018 16:40	WG1178154

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	195		1.88	5.66	1	10/09/2018 21:56	WG1178467
Residual Range Organics (RRO)	U		4.71	14.2	1	10/09/2018 21:56	WG1178467
(S) o-Terphenyl	77.4			18.0-148		10/09/2018 21:56	WG1178467



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	92.2		1	10/09/2018 13:18	WG1178155

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	2.10	J	1.17	3.44	31.75	10/09/2018 15:27	WG1177978
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/09/2018 15:27	WG1177978

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000434	0.00108	1	10/09/2018 16:58	WG1178154
Ethylbenzene	U		0.000575	0.00271	1	10/09/2018 16:58	WG1178154
Toluene	U		0.00136	0.00542	1	10/09/2018 16:58	WG1178154
Xylenes, Total	U		0.00519	0.00705	1	10/09/2018 16:58	WG1178154
(S) Toluene-d8	104			75.0-131		10/09/2018 16:58	WG1178154
(S) Dibromofluoromethane	92.5			65.0-129		10/09/2018 16:58	WG1178154
(S) 4-Bromofluorobenzene	89.4			67.0-138		10/09/2018 16:58	WG1178154

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	20.2	J	14.4	43.4	10	10/09/2018 22:21	WG1178467
Residual Range Organics (RRO)	131		36.1	108	10	10/09/2018 22:21	WG1178467
(S) o-Terphenyl	91.8			18.0-148		10/09/2018 22:21	WG1178467

Sample Narrative:

L1032834-02 WG1178467: Dilution due to matrix impact during extract concentration procedure



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	78.8		1	10/09/2018 13:18	WG1178155

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	160		1.08	3.17	25	10/09/2018 15:51	WG1177978
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		10/09/2018 15:51	WG1177978

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000508	0.00127	1	10/09/2018 17:17	WG1178154
Ethylbenzene	0.0245		0.000673	0.00317	1	10/09/2018 17:17	WG1178154
Toluene	0.00183	J	0.00159	0.00635	1	10/09/2018 17:17	WG1178154
Xylenes, Total	0.350		0.00607	0.00825	1	10/09/2018 17:17	WG1178154
(S) Toluene-d8	105			75.0-131		10/09/2018 17:17	WG1178154
(S) Dibromofluoromethane	97.7			65.0-129		10/09/2018 17:17	WG1178154
(S) 4-Bromofluorobenzene	131			67.0-138		10/09/2018 17:17	WG1178154

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	1200		16.9	50.8	10	10/09/2018 22:34	WG1178467
Residual Range Organics (RRO)	10.3	J	4.23	12.7	1	10/09/2018 22:09	WG1178467
(S) o-Terphenyl	191	J1		18.0-148		10/09/2018 22:09	WG1178467
(S) o-Terphenyl	167	J1		18.0-148		10/09/2018 22:34	WG1178467

Sample Narrative:

L1032834-03 WG1178467: Surrogate failure due to matrix interference



Method Blank (MB)

(MB) R3349190-1 10/09/18 13:18

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1032846-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1032846-06 10/09/18 13:18 • (DUP) R3349190-3 10/09/18 13:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	89.5	89.4	1	0.107		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3349190-2 10/09/18 13:18

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3349233-1 10/09/18 17:01

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1032892-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1032892-12 10/09/18 17:01 • (DUP) R3349233-3 10/09/18 17:01

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	91.6	92.2	1	0.693		10

Laboratory Control Sample (LCS)

(LCS) R3349233-2 10/09/18 17:01

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3349182-3 10/09/18 13:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.9			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3349182-1 10/09/18 12:29 • (LCSD) R3349182-2 10/09/18 12:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.55	5.93	101	108	71.0-124			6.61	20
(S) a,a,a-Trifluorotoluene(FID)				104	106	77.0-120				

L1032175-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1032175-17 10/09/18 18:40 • (MS) R3349182-4 10/09/18 23:55

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Gasoline Range Organics-NWTPH	5.50	ND	1.82	33.1	1	10.0-149	
(S) a,a,a-Trifluorotoluene(FID)				98.1		77.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3349138-2 10/09/18 12:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
<i>(S) Toluene-d8</i>	103			75.0-131
<i>(S) Dibromofluoromethane</i>	93.7			65.0-129
<i>(S) 4-Bromofluorobenzene</i>	89.2			67.0-138

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3349138-1 10/09/18 12:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.133	107	70.0-123	
Ethylbenzene	0.125	0.102	81.5	74.0-126	
Toluene	0.125	0.104	83.3	75.0-121	
Xylenes, Total	0.375	0.330	88.0	72.0-127	
<i>(S) Toluene-d8</i>			99.2	75.0-131	
<i>(S) Dibromofluoromethane</i>			101	65.0-129	
<i>(S) 4-Bromofluorobenzene</i>			85.0	67.0-138	

6 Qc

7 Gl

8 Al

9 Sc

L1031656-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1031656-03 10/09/18 19:26 • (MS) R3349138-3 10/09/18 20:22 • (MSD) R3349138-4 10/09/18 20:40

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.782	0.936	1.02	15.4	24.3	8	10.0-149			9.09	37
Ethylbenzene	0.125	6.06	5.93	6.13	0.000	7.05	8	10.0-160	V	V	3.36	38
Toluene	0.125	0.0169	0.225	0.291	20.9	27.4	8	10.0-156			25.4	38
Xylenes, Total	0.375	0.214	1.06	1.35	28.3	37.8	8	10.0-160			23.6	38
<i>(S) Toluene-d8</i>					105	103		75.0-131				
<i>(S) Dibromofluoromethane</i>					97.8	95.6		65.0-129				
<i>(S) 4-Bromofluorobenzene</i>					92.3	94.1		67.0-138				



Method Blank (MB)

(MB) R3349134-1 10/09/18 21:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	60.5			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3349134-2 10/09/18 21:31 • (LCSD) R3349134-3 10/09/18 21:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	17.0	17.2	68.0	68.8	50.0-150			1.17	20
Residual Range Organics (RRO)	25.0	15.1	15.6	60.4	62.4	50.0-150			3.26	20
<i>(S) o-Terphenyl</i>				60.7	61.6	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
V	The sample concentration is too high to evaluate accurate spike recoveries.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

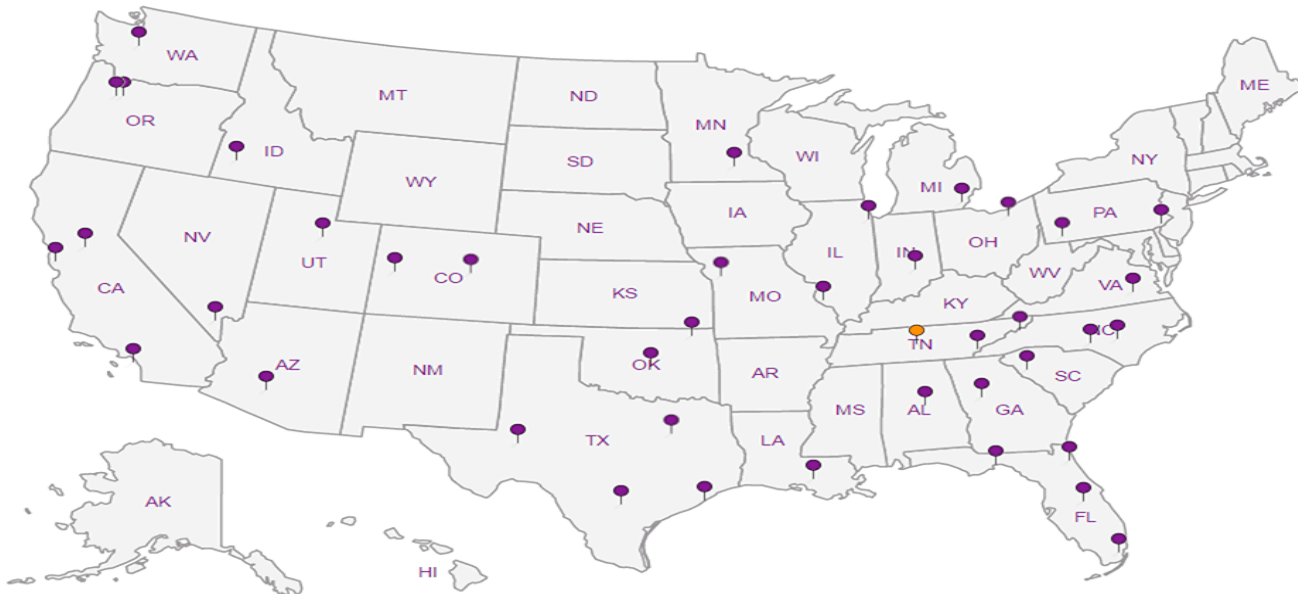
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

H043

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GHD Services	Address: 732 Broadway, Suite 301 Tacoma, WA 98402	Email: matthew.davis@ghd.com	Phone: 253-507-8217	Report To: Matthew Davis	Copy To: eric.maise@ghd.com; jeffrey.cloud@ghd.com
Requested Due Date: 24hr TAT		Project Name: P66 Sunnyside	Project #: 11145922	Attention: Accounts Payable	Company Name: GHD Services
		Purchase Order #:		Address: 20815 44th Ave W. Suite 190 Lynnwood, WA 98036	Pace Quote:
				Pace Project Manager: jennifer.gross@pacelabs.com	Pace Profile #: 39232
				Regulatory Agency:	
				State / Location:	
				WA / Sunnyside	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/sed Oil Wipe Air Other Tissue	CODE DW WT WW P SL CL WP AR OT TS	MATRIX CODE (see visit codes to left)	SAMPLE TYPE (G=GRAB, C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives									Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	L1032834							
						DATE	TIME	DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analytes Test					NVTPH-Dx	NVTPH-Gx	8260 BTEX	8260 Naphthalene, HVOC, MTBE	8260 EDB, EDC, n-hexane	8010 Lead	8270 cPAH
1	S-100818-EM-TB-14			SL	G	10/8	1300				8	X							X	X	X	X	X	X	X						Hold EPH, VPH, -01
2	S-100818-EM-SPZ			SL	G	10/8	1330				5	X							X	X	X									cPAH, lead, and -02	
3	S-100818-EM-G-10			SL	G	10/8	1400				8	X							X	X	X	X	X	X	X					non-BTEX -03	
4																														8260 until	
5																														approval to	
6																														analyze	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
RUSH 24hr TAT	Eric Maise GHD	10/8/18	1500	James D	10/9/18	0845	
							1-Hr Y Y Y

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER: ERIC MAISE	DATE Signed: 10/8/18	
SIGNATURE of SAMPLER: Eric Maise		
FedEx# 4486 7788 0737	COX	1.04+1.11K
BAD SCREEN: <0.5 mP/hr		rec. 21 cont

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client:	SDG#	4032834	
Cooler Received/Opened On: 10/ 9 /18	Temperature:	1.1	
Received By: Keteishia Cameron			
Signature: <i>K Cameron</i>			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		/	
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

GHD - Lynnwood, WA

Sample Delivery Group: L1034126
Samples Received: 10/12/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036










Entire Report Reviewed By:



Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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S-101018-EM-14-13 L1034126-02	6	
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SAMPLE SUMMARY



S-101018-EM-8-15 L1034126-01 Solid

Collected by
Eric Maisie

Collected date/time
10/10/18 11:00

Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180761	100	10/10/18 11:00	10/15/18 02:07	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/10/18 11:00	10/14/18 01:08	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 17:22	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	20	10/13/18 09:33	10/15/18 12:41	DMW

1
Cp

2
Tc

3
Ss

4
Cn

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Sr

6
Qc

7
Gl

8
Al

9
Sc

S-101018-EM-14-13 L1034126-02 Solid

Collected by
Eric Maisie

Collected date/time
10/10/18 13:00

Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180991	25	10/10/18 13:00	10/15/18 09:19	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/10/18 13:00	10/14/18 01:27	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 17:35	SHG

S-101018-EM-16-7 L1034126-03 Solid

Collected by
Eric Maisie

Collected date/time
10/10/18 14:00

Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180761	104	10/10/18 14:00	10/15/18 02:49	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1.07	10/10/18 14:00	10/14/18 01:45	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 17:47	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	100	10/13/18 09:33	10/15/18 12:53	DMW



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.4		1	10/12/2018 14:17	WG1180151

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	419		4.32	12.8	100	10/15/2018 02:07	WG1180761
(S) a,a,a-Trifluorotoluene(FID)	103			77.0-120		10/15/2018 02:07	WG1180761

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00601		0.000510	0.00128	1	10/14/2018 01:08	WG1180648
Toluene	0.00401	J	0.00159	0.00638	1	10/14/2018 01:08	WG1180648
Ethylbenzene	1.04		0.000676	0.00319	1	10/14/2018 01:08	WG1180648
Total Xylenes	0.0350		0.00610	0.00829	1	10/14/2018 01:08	WG1180648
(S) Toluene-d8	109			75.0-131		10/14/2018 01:08	WG1180648
(S) Dibromofluoromethane	99.5			65.0-129		10/14/2018 01:08	WG1180648
(S) a,a,a-Trifluorotoluene	102			80.0-120		10/14/2018 01:08	WG1180648
(S) 4-Bromofluorobenzene	128			67.0-138		10/14/2018 01:08	WG1180648

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	2620		33.9	102	20	10/15/2018 12:41	WG1180285
Residual Range Organics (RRO)	25.4		4.25	12.8	1	10/14/2018 17:22	WG1180285
(S) o-Terphenyl	92.7			18.0-148		10/14/2018 17:22	WG1180285
(S) o-Terphenyl	236	J7		18.0-148		10/15/2018 12:41	WG1180285

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	67.1		1	10/12/2018 14:17	WG1180151

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.79	J	1.26	3.73	25	10/15/2018 09:19	WG1180991
(S) a,a,a-Trifluorotoluene(FID)	99.8			77.0-120		10/15/2018 09:19	WG1180991

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000596	0.00149	1	10/14/2018 01:27	WG1180648
Toluene	U		0.00186	0.00745	1	10/14/2018 01:27	WG1180648
Ethylbenzene	0.00212	J	0.000790	0.00373	1	10/14/2018 01:27	WG1180648
Total Xylenes	U		0.00712	0.00969	1	10/14/2018 01:27	WG1180648
(S) Toluene-d8	102			75.0-131		10/14/2018 01:27	WG1180648
(S) Dibromofluoromethane	96.9			65.0-129		10/14/2018 01:27	WG1180648
(S) a,a,a-Trifluorotoluene	99.1			80.0-120		10/14/2018 01:27	WG1180648
(S) 4-Bromofluorobenzene	95.0			67.0-138		10/14/2018 01:27	WG1180648

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.98	5.96	1	10/14/2018 17:35	WG1180285
Residual Range Organics (RRO)	U		4.96	14.9	1	10/14/2018 17:35	WG1180285
(S) o-Terphenyl	74.3			18.0-148		10/14/2018 17:35	WG1180285



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.3		1	10/12/2018 14:17	WG1180151

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	362		4.22	12.5	104	10/15/2018 02:49	WG1180761
(S) a,a,a-Trifluorotoluene(FID)	105			77.0-120		10/15/2018 02:49	WG1180761

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00295		0.000514	0.00128	1.07	10/14/2018 01:45	WG1180648
Toluene	0.00318	J	0.00161	0.00642	1.07	10/14/2018 01:45	WG1180648
Ethylbenzene	0.290		0.000680	0.00321	1.07	10/14/2018 01:45	WG1180648
Total Xylenes	2.11		0.00613	0.00835	1.07	10/14/2018 01:45	WG1180648
(S) Toluene-d8	123			75.0-131		10/14/2018 01:45	WG1180648
(S) Dibromofluoromethane	101			65.0-129		10/14/2018 01:45	WG1180648
(S) a,a,a-Trifluorotoluene	96.8			80.0-120		10/14/2018 01:45	WG1180648
(S) 4-Bromofluorobenzene	119			67.0-138		10/14/2018 01:45	WG1180648

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	10300		160	480	100	10/15/2018 12:53	WG1180285
Residual Range Organics (RRO)	83.8		4.00	12.0	1	10/14/2018 17:47	WG1180285
(S) o-Terphenyl	179	J1		18.0-148		10/14/2018 17:47	WG1180285
(S) o-Terphenyl	1150	J7		18.0-148		10/15/2018 12:53	WG1180285

Sample Narrative:

L1034126-03 WG1180285: Surrogate failure due to matrix interference



Method Blank (MB)

(MB) R3350312-1 10/12/18 14:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1034126-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1034126-03 10/12/18 14:17 • (DUP) R3350312-3 10/12/18 14:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	83.3	83.2	1	0.206		10

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3350312-2 10/12/18 14:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

9 Sc



Method Blank (MB)

(MB) R3350590-3 10/14/18 21:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.0339	0.100
^(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350590-1 10/14/18 19:57 • (LCSD) R3350590-2 10/14/18 20:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	6.22	6.03	113	110	71.0-124			2.99	20
^(S) a,a,a-Trifluorotoluene(FID)				102	102	77.0-120				

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3350608-3 10/15/18 01:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.0339	0.100
^(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350608-1 10/15/18 00:21 • (LCSD) R3350608-2 10/15/18 00:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	6.11	6.01	111	109	71.0-124			1.66	20
^(S) a,a,a-Trifluorotoluene(FID)				105	105	77.0-120				

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3350404-2 10/13/18 21:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	103			75.0-131
(S) Dibromofluoromethane	92.3			65.0-129
(S) a,a,a-Trifluorotoluene	101			80.0-120
(S) 4-Bromofluorobenzene	87.4			67.0-138

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS)

(LCS) R3350404-1 10/13/18 20:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.113	90.5	70.0-123	
Ethylbenzene	0.125	0.0930	74.4	74.0-126	
Toluene	0.125	0.0957	76.6	75.0-121	
Xylenes, Total	0.375	0.299	79.7	72.0-127	
(S) Toluene-d8			101	75.0-131	
(S) Dibromofluoromethane			91.0	65.0-129	
(S) a,a,a-Trifluorotoluene			103	80.0-120	
(S) 4-Bromofluorobenzene			88.3	67.0-138	

L1033985-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033985-01 10/14/18 03:54 • (MS) R3350404-3 10/14/18 04:12 • (MSD) R3350404-4 10/14/18 04:31

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.147	U	0.576	1.21	48.9	103	8	10.0-149		J3	71.0	37
Ethylbenzene	0.147	U	0.467	1.02	39.7	87.0	8	10.0-160		J3	74.8	38
Toluene	0.147	U	0.449	0.980	38.1	83.2	8	10.0-156		J3	74.3	38
Xylenes, Total	0.441	U	1.49	3.14	42.3	89.0	8	10.0-160		J3	71.0	38
(S) Toluene-d8					101	102		75.0-131				
(S) Dibromofluoromethane					105	98.9		65.0-129				
(S) a,a,a-Trifluorotoluene					101	99.2		80.0-120				
(S) 4-Bromofluorobenzene					99.1	97.8		67.0-138				



Method Blank (MB)

(MB) R3350594-1 10/14/18 15:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	74.8			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350594-2 10/14/18 15:41 • (LCSD) R3350594-3 10/14/18 15:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	19.0	19.8	76.0	79.2	50.0-150			4.12	20
Residual Range Organics (RRO)	25.0	17.7	17.3	70.8	69.2	50.0-150			2.29	20
(S) o-Terphenyl				67.7	68.2	18.0-148				

L1033388-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033388-04 10/14/18 20:24 • (MS) R3350594-4 10/14/18 20:37 • (MSD) R3350594-5 10/14/18 20:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	4.51	30.1	26.3	102	87.2	1	50.0-150			13.5	20
Residual Range Organics (RRO)	25.0	ND	30.8	27.4	110	96.1	1	50.0-150			11.7	20
(S) o-Terphenyl					62.8	59.5		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

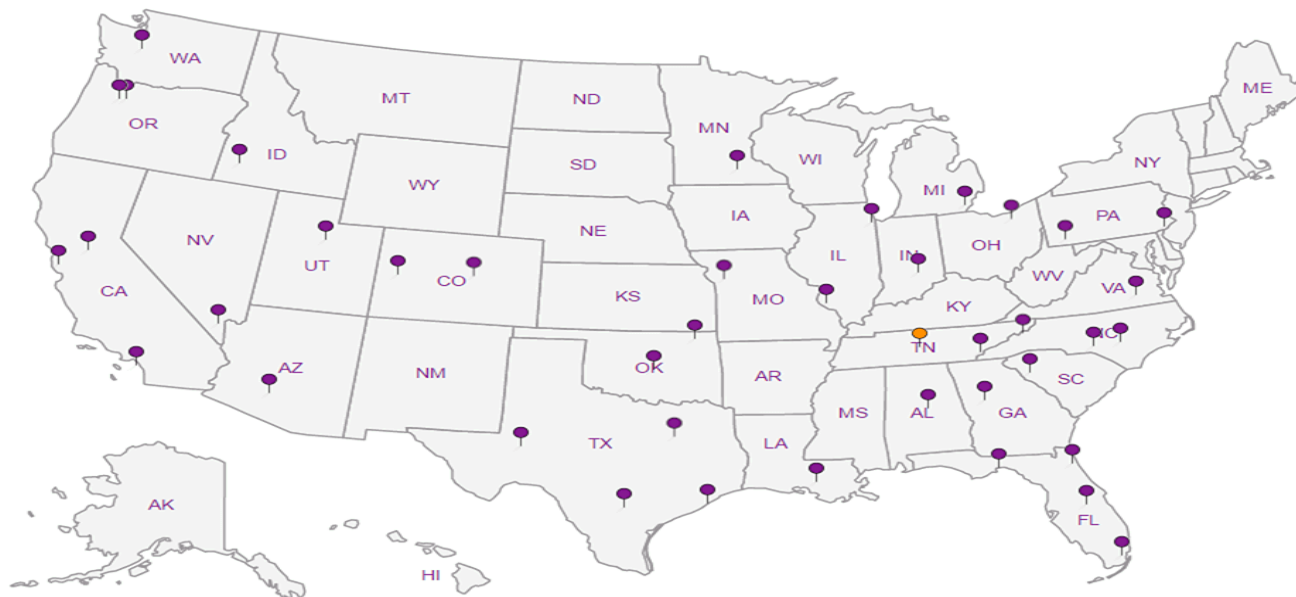
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



Section A
Required Client Information:

Company: GHD Services
 Address: 732 Broadway, Suite 301
 Tacoma, WA 98402
 Email: matthew.davis@ghd.com
 Phone: 253-507-6217 Fax: _____
 Requested Due Date: ~~10-day standard~~
24-hr RUSH

Section B
Required Project Information:

Report To: Matthew Davis
 Copy To: eric.maise@ghd.com; jeffrey.cloud@ghd.com
 Purchase Order #: _____
 Project Name: P66 Sunnyside
 Project #: 11145922

Section C
Invoice Information:

Attention: Accounts Payable
 Company Name: GHD Services
 Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036
 Pace Quote: _____
 Pace Project Manager: jennifer.gross@pacelabs.com
 Pace Profile #: 39232

Regulatory Agency: _____
 State / Location: WA / Sunnyside

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9, /, .)</small> Sample Ids must be unique	MATRIX CODE <small>(see valid codes to left)</small>	SAMPLE TYPE <small>(G=GRAB C=COMP)</small>	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES									ANALYSES TEST	Y/N	REQUESTED ANALYSIS FILTERED (Y/N)	RESIDUAL CHLORINE (Y/N)							
				START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	NWTFH-Dx					NWTFH-Gx	8260 BTEX	8260 Naphthalene; HVOC; MTBE	8280 EDB; EDC; n-hexane	8010 Lead	8270 cPAH	8062 PCB
1	S-101018-EM-8-15	SL	G	6/10/10	1100		2	X								X	X	X	X	X	X	X	X	X		01	21034126 Hold EPH, VPH, cPAH, lead and non-BTEX until authorized
2	S-101018-EM-14-13				1300		2	X								X	X	X	X	X	X	X	X	X		02	
3	S-101018-EM-16-7				1400		2	X								X	X	X	X	X	X	X	X	X		03	
4-11																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	
RUSH 24 hr TAT	Eric Maise GHD	10/18	1600	K. Maise	10/12/18	0845		

FeedEx # 7831 9154 8012

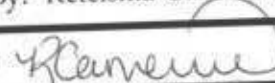
SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: **Eric Maise**
 SIGNATURE of SAMPLER: *Eric Maise*

DATE Signed: **10/10/18 1500**

rec. 24 cond 1.0+1 = 1.1 kg COCST

TEMP in C	Received on ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
-----------	-----------------------	----------------------	--------------	----------------------

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client:	GHDLWA	SDG#	L1634126	
Cooler Received/Opened On: 10/12/18		Temperature:	1.1	
Received By: Keteishia Cameron				
Signature: 				
Receipt Check List		NP	Yes	No
COC Seal Present / Intact?			/	
COC Signed / Accurate?			/	
Bottles arrive intact?			/	
Correct bottles used?			/	
Sufficient volume sent?				
If Applicable				
VOA Zero headspace?				
Preservation Correct / Checked?				

October 15, 2018

GHD - Lynnwood, WA

Sample Delivery Group: L1034156
Samples Received: 10/12/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036










Entire Report Reviewed By:



Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	
Tc: Table of Contents	2	
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Cn: Case Narrative	4	
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S-101118-EM-11-12 L1034156-02	6	
S-101118-EM-25-8 L1034156-03	7	
S-101118-EM-TB5-14 L1034156-04	8	
S-101118-EM-24-14 L1034156-05	9	
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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	13	
Gl: Glossary of Terms	14	
Al: Accreditations & Locations	15	
Sc: Sample Chain of Custody	16	

SAMPLE SUMMARY



S-101118-EM-NW-14 L1034156-01 Solid

Collected by
Eric Maisie
Collected date/time
10/11/18 13:00
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180278	25	10/11/18 13:00	10/12/18 22:25	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/11/18 13:00	10/14/18 02:22	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	10	10/13/18 09:33	10/15/18 11:25	DMW

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

S-101118-EM-11-12 L1034156-02 Solid

Collected by
Eric Maisie
Collected date/time
10/11/18 13:15
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180278	25	10/11/18 13:15	10/12/18 22:49	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/11/18 13:15	10/14/18 02:40	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 18:13	SHG

S-101118-EM-25-8 L1034156-03 Solid

Collected by
Eric Maisie
Collected date/time
10/11/18 13:30
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180278	25	10/11/18 13:30	10/12/18 23:13	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/11/18 13:30	10/14/18 02:59	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 18:25	SHG

S-101118-EM-TB5-14 L1034156-04 Solid

Collected by
Eric Maisie
Collected date/time
10/11/18 14:00
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180278	25	10/11/18 14:00	10/12/18 23:37	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/11/18 14:00	10/14/18 03:17	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 18:38	SHG

S-101118-EM-24-14 L1034156-05 Solid

Collected by
Eric Maisie
Collected date/time
10/11/18 14:30
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1180278	25	10/11/18 14:30	10/13/18 00:01	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1180648	1	10/11/18 14:30	10/14/18 03:36	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	1	10/13/18 09:33	10/14/18 18:52	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1180285	5	10/13/18 09:33	10/15/18 12:28	DMW



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	10/12/2018 14:17	WG1180151

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	22.2		1.04	3.08	25	10/12/2018 22:25	WG1180278
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		10/12/2018 22:25	WG1180278

Volatile Organic Compounds (GC/MS) by Method 8260C

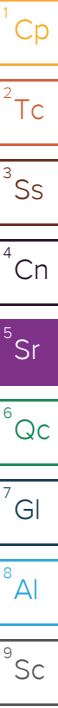
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000493	0.00123	1	10/14/2018 02:22	WG1180648
Toluene	U		0.00154	0.00616	1	10/14/2018 02:22	WG1180648
Ethylbenzene	U		0.000653	0.00308	1	10/14/2018 02:22	WG1180648
Total Xylenes	U		0.00589	0.00801	1	10/14/2018 02:22	WG1180648
(S) Toluene-d8	104			75.0-131		10/14/2018 02:22	WG1180648
(S) Dibromofluoromethane	97.1			65.0-129		10/14/2018 02:22	WG1180648
(S) a,a,a-Trifluorotoluene	98.0			80.0-120		10/14/2018 02:22	WG1180648
(S) 4-Bromofluorobenzene	100			67.0-138		10/14/2018 02:22	WG1180648

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	106		16.4	49.3	10	10/15/2018 11:25	WG1180285
Residual Range Organics (RRO)	U		41.0	123	10	10/15/2018 11:25	WG1180285
(S) o-Terphenyl	106			18.0-148		10/15/2018 11:25	WG1180285

Sample Narrative:

L1034156-01 WG1180285: Dilution due to matrix impact during extract concentration procedure





Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.2		1	10/12/2018 14:17	WG1180151

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	89.7		1.11	3.28	25	10/12/2018 22:49	WG1180278
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/12/2018 22:49	WG1180278

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000525	0.00131	1	10/14/2018 02:40	WG1180648
Toluene	U		0.00164	0.00657	1	10/14/2018 02:40	WG1180648
Ethylbenzene	0.0267		0.000696	0.00328	1	10/14/2018 02:40	WG1180648
Total Xylenes	0.0701		0.00628	0.00854	1	10/14/2018 02:40	WG1180648
(S) Toluene-d8	103			75.0-131		10/14/2018 02:40	WG1180648
(S) Dibromofluoromethane	98.3			65.0-129		10/14/2018 02:40	WG1180648
(S) a,a,a-Trifluorotoluene	98.6			80.0-120		10/14/2018 02:40	WG1180648
(S) 4-Bromofluorobenzene	110			67.0-138		10/14/2018 02:40	WG1180648

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	70.6		1.75	5.25	1	10/14/2018 18:13	WG1180285
Residual Range Organics (RRO)	U		4.37	13.1	1	10/14/2018 18:13	WG1180285
(S) o-Terphenyl	51.4			18.0-148		10/14/2018 18:13	WG1180285



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.0		1	10/12/2018 14:17	WG1180151

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.10	J	1.07	3.17	25	10/12/2018 23:13	WG1180278
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		10/12/2018 23:13	WG1180278

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000507	0.00127	1	10/14/2018 02:59	WG1180648
Toluene	U		0.00158	0.00633	1	10/14/2018 02:59	WG1180648
Ethylbenzene	U		0.000671	0.00317	1	10/14/2018 02:59	WG1180648
Total Xylenes	U		0.00605	0.00823	1	10/14/2018 02:59	WG1180648
(S) Toluene-d8	102			75.0-131		10/14/2018 02:59	WG1180648
(S) Dibromofluoromethane	97.0			65.0-129		10/14/2018 02:59	WG1180648
(S) a,a,a-Trifluorotoluene	99.0			80.0-120		10/14/2018 02:59	WG1180648
(S) 4-Bromofluorobenzene	95.5			67.0-138		10/14/2018 02:59	WG1180648

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.68	5.07	1	10/14/2018 18:25	WG1180285
Residual Range Organics (RRO)	U		4.22	12.7	1	10/14/2018 18:25	WG1180285
(S) o-Terphenyl	51.8			18.0-148		10/14/2018 18:25	WG1180285



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	73.6		1	10/12/2018 14:17	WG1180151

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.66	J	1.15	3.40	25	10/12/2018 23:37	WG1180278
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/12/2018 23:37	WG1180278

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000615	J	0.000543	0.00136	1	10/14/2018 03:17	WG1180648
Toluene	U		0.00170	0.00679	1	10/14/2018 03:17	WG1180648
Ethylbenzene	0.00424		0.000720	0.00340	1	10/14/2018 03:17	WG1180648
Total Xylenes	U		0.00649	0.00883	1	10/14/2018 03:17	WG1180648
(S) Toluene-d8	102			75.0-131		10/14/2018 03:17	WG1180648
(S) Dibromofluoromethane	96.0			65.0-129		10/14/2018 03:17	WG1180648
(S) a,a,a-Trifluorotoluene	97.7			80.0-120		10/14/2018 03:17	WG1180648
(S) 4-Bromofluorobenzene	94.8			67.0-138		10/14/2018 03:17	WG1180648

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.81	5.43	1	10/14/2018 18:38	WG1180285
Residual Range Organics (RRO)	U		4.52	13.6	1	10/14/2018 18:38	WG1180285
(S) o-Terphenyl	58.5			18.0-148		10/14/2018 18:38	WG1180285

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	70.1		1	10/12/2018 14:17	WG1180151

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	166		1.21	3.57	25	10/13/2018 00:01	WG1180278
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/13/2018 00:01	WG1180278

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000997	J	0.000570	0.00143	1	10/14/2018 03:36	WG1180648
Toluene	U		0.00178	0.00713	1	10/14/2018 03:36	WG1180648
Ethylbenzene	0.00115	J	0.000756	0.00357	1	10/14/2018 03:36	WG1180648
Total Xylenes	U		0.00682	0.00927	1	10/14/2018 03:36	WG1180648
(S) Toluene-d8	100			75.0-131		10/14/2018 03:36	WG1180648
(S) Dibromofluoromethane	101			65.0-129		10/14/2018 03:36	WG1180648
(S) a,a,a-Trifluorotoluene	98.5			80.0-120		10/14/2018 03:36	WG1180648
(S) 4-Bromofluorobenzene	76.2			67.0-138		10/14/2018 03:36	WG1180648

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	308		9.48	28.5	5	10/15/2018 12:28	WG1180285
Residual Range Organics (RRO)	U		4.75	14.3	1	10/14/2018 18:52	WG1180285
(S) o-Terphenyl	51.8			18.0-148		10/15/2018 12:28	WG1180285
(S) o-Terphenyl	91.6			18.0-148		10/14/2018 18:52	WG1180285



Method Blank (MB)

(MB) R3350312-1 10/12/18 14:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1034126-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1034126-03 10/12/18 14:17 • (DUP) R3350312-3 10/12/18 14:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	83.3	83.2	1	0.206		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3350312-2 10/12/18 14:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3350450-3 10/12/18 17:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350450-1 10/12/18 15:57 • (LCSD) R3350450-2 10/12/18 16:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.53	5.50	101	100	71.0-124			0.538	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-120				

L1033363-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033363-04 10/12/18 20:48 • (MS) R3350450-4 10/13/18 00:25 • (MSD) R3350450-5 10/13/18 00:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	ND	49.9	48.1	35.4	34.1	25	10.0-149			3.71	27
(S) a,a,a-Trifluorotoluene(FID)					103	103		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3350404-2 10/13/18 21:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	103			75.0-131
(S) Dibromofluoromethane	92.3			65.0-129
(S) a,a,a-Trifluorotoluene	101			80.0-120
(S) 4-Bromofluorobenzene	87.4			67.0-138

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS)

(LCS) R3350404-1 10/13/18 20:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.113	90.5	70.0-123	
Ethylbenzene	0.125	0.0930	74.4	74.0-126	
Toluene	0.125	0.0957	76.6	75.0-121	
Xylenes, Total	0.375	0.299	79.7	72.0-127	
(S) Toluene-d8			101	75.0-131	
(S) Dibromofluoromethane			91.0	65.0-129	
(S) a,a,a-Trifluorotoluene			103	80.0-120	
(S) 4-Bromofluorobenzene			88.3	67.0-138	

L1033985-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033985-01 10/14/18 03:54 • (MS) R3350404-3 10/14/18 04:12 • (MSD) R3350404-4 10/14/18 04:31

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.147	U	0.576	1.21	48.9	103	8	10.0-149		J3	71.0	37
Ethylbenzene	0.147	U	0.467	1.02	39.7	87.0	8	10.0-160		J3	74.8	38
Toluene	0.147	U	0.449	0.980	38.1	83.2	8	10.0-156		J3	74.3	38
Xylenes, Total	0.441	U	1.49	3.14	42.3	89.0	8	10.0-160		J3	71.0	38
(S) Toluene-d8					101	102		75.0-131				
(S) Dibromofluoromethane					105	98.9		65.0-129				
(S) a,a,a-Trifluorotoluene					101	99.2		80.0-120				
(S) 4-Bromofluorobenzene					99.1	97.8		67.0-138				



Method Blank (MB)

(MB) R3350594-1 10/14/18 15:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	74.8			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350594-2 10/14/18 15:41 • (LCSD) R3350594-3 10/14/18 15:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	19.0	19.8	76.0	79.2	50.0-150			4.12	20
Residual Range Organics (RRO)	25.0	17.7	17.3	70.8	69.2	50.0-150			2.29	20
(S) o-Terphenyl				67.7	68.2	18.0-148				

L1033388-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033388-04 10/14/18 20:24 • (MS) R3350594-4 10/14/18 20:37 • (MSD) R3350594-5 10/14/18 20:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	4.51	30.1	26.3	102	87.2	1	50.0-150			13.5	20
Residual Range Organics (RRO)	25.0	ND	30.8	27.4	110	96.1	1	50.0-150			11.7	20
(S) o-Terphenyl					62.8	59.5		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

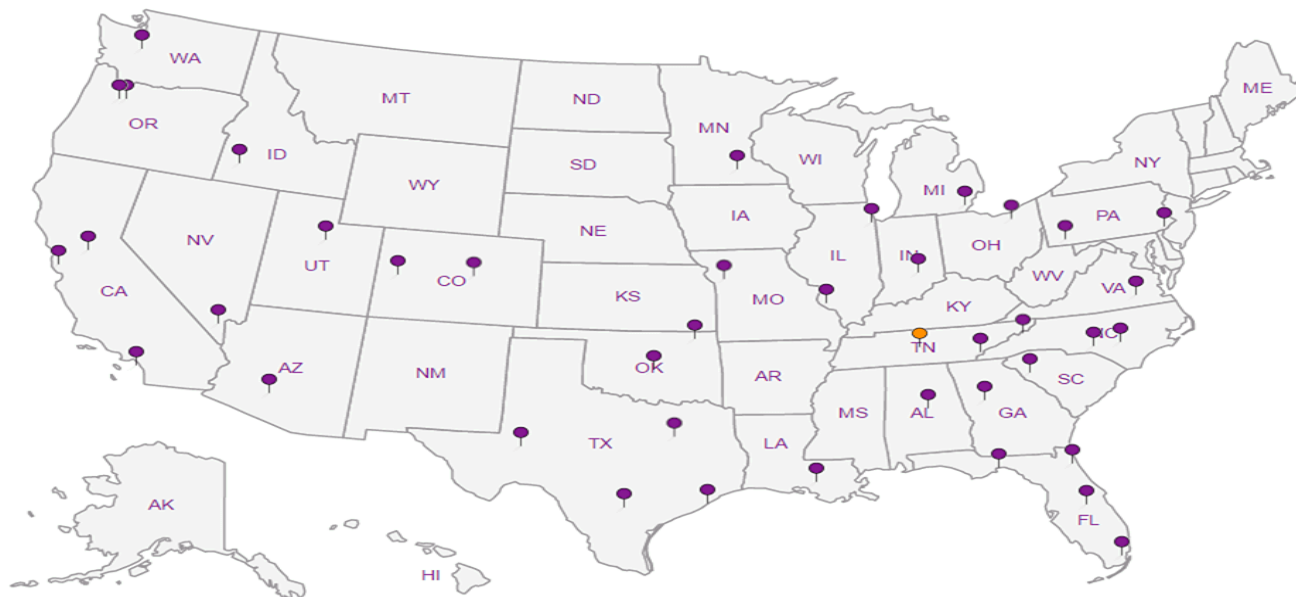
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: **GHD Services Inc.**
 Billing Information:
 Address:
 Report To: **Matt.Davis@ghd.com**
 Email To:
 Copy To: **Eric.Maise@ghd.com**
 Site Collection Info/Address:
 Customer Project Name/Number: **11145922**
 State: **WA** County/City: Time Zone Collected: [] PT [] MT [] CT [] ET
 Phone: Site/Facility ID #: Compliance Monitoring? [] Yes [] No
 Email:
 Collected By (print): **Eric Maise** Purchase Order #: DW PWS ID #: DW Location Code:
 Quote #:
 Collected By (signature): *[Signature]* Turnaround Date Required: **24 hr TAT** Immediately Packed on Ice: [] Yes [] No
 Sample Disposal: Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)
 [] Dispose as appropriate [] Return [] Archive: Field Filtered (if applicable): [] Yes [] No
 [] Hold: Analysis:

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type **
6 U 6 U 6 U U
 Lab Project Manager:
 ** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Analyses										Lab Profile/Line:				
			Date	Time	Date	Time			1	2	3	4	5	6	7	8	9	10		11	12		
S-101118-EM-NW-14	SL	G		1300					X	X	X	X	X	X	X	X	X	X	X	X	X	X	Lab Sample Receipt Checklist: Custody Seals Present/Intact <input checked="" type="checkbox"/> N NA Custody Signatures Present <input checked="" type="checkbox"/> N NA Collector Signature Present <input checked="" type="checkbox"/> N NA Bottles Intact <input checked="" type="checkbox"/> N NA Correct Bottles <input checked="" type="checkbox"/> N NA Sufficient Volume <input checked="" type="checkbox"/> N NA Samples Received on Ice <input checked="" type="checkbox"/> N NA VOA - Headspace Acceptable Y N <input checked="" type="checkbox"/> USDA Regulated Soils Y N <input checked="" type="checkbox"/> Samples in Holding Time <input checked="" type="checkbox"/> N NA Residual Chlorine Present Y N NA Cl Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: LAB USE ONLY: Lab Sample # / Comments:
S-101118-EM-11-12				1315					X	X	X	X	X	X	X	X	X	X	X	X	X	L 1034196-01 02 03 04 05	
S-101118-EM-25-8				1330					X	X	X	X	X	X	X	X	X	X	X	X	X		
S-101118-EM-TB5-14				1400					X	X	X	X	X	X	X	X	X	X	X	X	X		
S-101118-EM-24-14				1430					X	X	X	X	X	X	X	X	X	X	X	X	X		

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Remarks / Special Conditions / Possible Hazards:
Hold vPH, EPH, cPAH, Lead and non-BTEX 8260 until authorized

Type of Ice Used: Wet Blue Dry None
 SHORT HOLDS PRESENT (<72 hours): Y N N/A
 Packing Material Used: Lab Tracking #: **7832 1042 7606**
 Radchem sample(s) screened (<500 cpm): Y N NA
 Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm ID#: **11**
 Cooler 1 Temp Upon Receipt: **1.0** °C
 Cooler 1 Therm Corr. Factor: **#1** °C
 Cooler 1 Corrected Temp: **1.1** °C
 Comments:
 Trip Blank Received: Y N NA
 HCL MeOH TSP Other
 Non Conformance(s): YES / NO
 Page: of:

Relinquished by/Company: (Signature) *[Signature]* GHD Date/Time: **10/11 1600** Received by/Company: (Signature) Date/Time: **H142**
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) *[Signature]* Date/Time: **10/12/18 0845**
 Acctnum:
 Template:
 Prelogin:
 PM:
 PB:

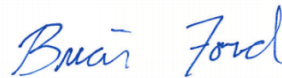
October 22, 2018

GHD - Lynnwood, WA

Sample Delivery Group: L1035377
Samples Received: 10/17/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



S-101618-EM-22-7 L1035377-01 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 09:00
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1184145	555	10/16/18 09:00	10/22/18 04:07	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1	10/16/18 09:00	10/18/18 12:50	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	2	10/19/18 08:05	10/20/18 03:01	AAT
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	200	10/19/18 08:05	10/20/18 15:33	AAT

- 1
Cp
- 2
Tc
- 3
Ss
- 4
Cn

S-101618-EM-TB2-14 L1035377-02 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 10:00
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182475	25	10/16/18 10:00	10/19/18 06:09	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1	10/16/18 10:00	10/18/18 13:09	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	1	10/19/18 08:05	10/20/18 03:15	AAT
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	5	10/19/18 08:05	10/20/18 15:06	AAT

- 5
Sr
- 6
Qc
- 7
Gl
- 8
Al

S-101618-EM-29-13 L1035377-03 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 10:30
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182475	25	10/16/18 10:30	10/19/18 06:30	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1	10/16/18 10:30	10/18/18 13:29	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	1	10/19/18 08:05	10/20/18 03:28	AAT

- 9
Sc

S-101618-EM-25-12 L1035377-04 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 11:00
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182475	25	10/16/18 11:00	10/19/18 06:51	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1	10/16/18 11:00	10/18/18 13:49	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	1	10/19/18 08:05	10/20/18 03:42	AAT

S-101618-EM-26-7 L1035377-05 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 12:00
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182475	25	10/16/18 12:00	10/19/18 07:12	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1	10/16/18 12:00	10/18/18 14:09	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	1	10/19/18 08:05	10/20/18 03:55	AAT

S-101618-EM-1-8 L1035377-06 Solid

Collected by
Eric Maise
Collected date/time
10/16/18 13:00
Received date/time
10/17/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182859	1	10/19/18 10:17	10/19/18 10:26	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182475	26.75	10/16/18 13:00	10/19/18 07:33	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183736	1	10/16/18 13:00	10/20/18 01:10	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	1	10/19/18 08:05	10/20/18 04:09	AAT

SAMPLE SUMMARY



S-101518-EM-SP3 L1035377-07 Solid

Collected by Eric Maisie	Collected date/time 10/15/18 14:00	Received date/time 10/17/18 08:45
-----------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1182843	1	10/18/18 14:06	10/18/18 14:16	JD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1182562	28.5	10/15/18 14:00	10/18/18 13:55	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1182742	1.06	10/15/18 14:00	10/18/18 12:30	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1183177	20	10/19/18 08:05	10/20/18 01:13	AAT

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.6		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	3850		23.3	68.8	555	10/22/2018 04:07	WG1184145
(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-120		10/22/2018 04:07	WG1184145

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000692	J	0.000496	0.00124	1	10/18/2018 12:50	WG1182742
Toluene	U		0.00155	0.00620	1	10/18/2018 12:50	WG1182742
Ethylbenzene	0.0846		0.000657	0.00310	1	10/18/2018 12:50	WG1182742
Total Xylenes	0.567		0.00593	0.00806	1	10/18/2018 12:50	WG1182742
(S) Toluene-d8	118			75.0-131		10/18/2018 12:50	WG1182742
(S) Dibromofluoromethane	84.2			65.0-129		10/18/2018 12:50	WG1182742
(S) a,a,a-Trifluorotoluene	81.3			80.0-120		10/18/2018 12:50	WG1182742
(S) 4-Bromofluorobenzene	111			67.0-138		10/18/2018 12:50	WG1182742

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	18200		330	992	200	10/20/2018 15:33	WG1183177
Residual Range Organics (RRO)	242		8.26	24.8	2	10/20/2018 03:01	WG1183177
(S) o-Terphenyl	0.000	J2		18.0-148		10/20/2018 03:01	WG1183177
(S) o-Terphenyl	0.000	J7		18.0-148		10/20/2018 15:33	WG1183177

Sample Narrative:

L1035377-01 WG1183177: Low surrogate due to matrix interference.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.2		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	322		1.11	3.28	25	10/19/2018 06:09	WG1182475
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		10/19/2018 06:09	WG1182475

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00611		0.000525	0.00131	1	10/18/2018 13:09	WG1182742
Toluene	0.0207		0.00164	0.00656	1	10/18/2018 13:09	WG1182742
Ethylbenzene	0.728		0.000695	0.00328	1	10/18/2018 13:09	WG1182742
Total Xylenes	0.303		0.00627	0.00853	1	10/18/2018 13:09	WG1182742
(S) Toluene-d8	117			75.0-131		10/18/2018 13:09	WG1182742
(S) Dibromofluoromethane	85.6			65.0-129		10/18/2018 13:09	WG1182742
(S) a,a,a-Trifluorotoluene	81.4			80.0-120		10/18/2018 13:09	WG1182742
(S) 4-Bromofluorobenzene	99.4			67.0-138		10/18/2018 13:09	WG1182742

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	276		8.72	26.2	5	10/20/2018 15:06	WG1183177
Residual Range Organics (RRO)	U		4.37	13.1	1	10/20/2018 03:15	WG1183177
(S) o-Terphenyl	57.5			18.0-148		10/20/2018 03:15	WG1183177
(S) o-Terphenyl	64.0			18.0-148		10/20/2018 15:06	WG1183177



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	76.4		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	8.96		1.11	3.27	25	10/19/2018 06:30	WG1182475
(S) a,a,a-Trifluorotoluene(FID)	110			77.0-120		10/19/2018 06:30	WG1182475

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000524	0.00131	1	10/18/2018 13:29	WG1182742
Toluene	U		0.00164	0.00654	1	10/18/2018 13:29	WG1182742
Ethylbenzene	U		0.000694	0.00327	1	10/18/2018 13:29	WG1182742
Total Xylenes	U		0.00626	0.00851	1	10/18/2018 13:29	WG1182742
(S) Toluene-d8	110			75.0-131		10/18/2018 13:29	WG1182742
(S) Dibromofluoromethane	80.5			65.0-129		10/18/2018 13:29	WG1182742
(S) a,a,a-Trifluorotoluene	80.8			80.0-120		10/18/2018 13:29	WG1182742
(S) 4-Bromofluorobenzene	98.8			67.0-138		10/18/2018 13:29	WG1182742

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		1.74	5.24	1	10/20/2018 03:28	WG1183177
Residual Range Organics (RRO)	U		4.36	13.1	1	10/20/2018 03:28	WG1183177
(S) o-Terphenyl	54.1			18.0-148		10/20/2018 03:28	WG1183177



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.6		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	54.0		1.14	3.35	25	10/19/2018 06:51	WG1182475
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		10/19/2018 06:51	WG1182475

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000536	0.00134	1	10/18/2018 13:49	WG1182742
Toluene	U		0.00167	0.00670	1	10/18/2018 13:49	WG1182742
Ethylbenzene	U		0.000710	0.00335	1	10/18/2018 13:49	WG1182742
Total Xylenes	U		0.00640	0.00871	1	10/18/2018 13:49	WG1182742
(S) Toluene-d8	117			75.0-131		10/18/2018 13:49	WG1182742
(S) Dibromofluoromethane	77.4			65.0-129		10/18/2018 13:49	WG1182742
(S) a,a,a-Trifluorotoluene	83.2			80.0-120		10/18/2018 13:49	WG1182742
(S) 4-Bromofluorobenzene	91.5			67.0-138		10/18/2018 13:49	WG1182742

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	94.6		1.78	5.36	1	10/20/2018 03:42	WG1183177
Residual Range Organics (RRO)	U		4.46	13.4	1	10/20/2018 03:42	WG1183177
(S) o-Terphenyl	57.7			18.0-148		10/20/2018 03:42	WG1183177



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.0		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.84	J	1.02	3.01	25	10/19/2018 07:12	WG1182475
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120		10/19/2018 07:12	WG1182475

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00120	1	10/18/2018 14:09	WG1182742
Toluene	U		0.00151	0.00602	1	10/18/2018 14:09	WG1182742
Ethylbenzene	U		0.000639	0.00301	1	10/18/2018 14:09	WG1182742
Total Xylenes	U		0.00576	0.00783	1	10/18/2018 14:09	WG1182742
(S) Toluene-d8	116			75.0-131		10/18/2018 14:09	WG1182742
(S) Dibromofluoromethane	77.0			65.0-129		10/18/2018 14:09	WG1182742
(S) a,a,a-Trifluorotoluene	81.9			80.0-120		10/18/2018 14:09	WG1182742
(S) 4-Bromofluorobenzene	94.2			67.0-138		10/18/2018 14:09	WG1182742

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	28.3		1.60	4.82	1	10/20/2018 03:55	WG1183177
Residual Range Organics (RRO)	U		4.01	12.0	1	10/20/2018 03:55	WG1183177
(S) o-Terphenyl	62.6			18.0-148		10/20/2018 03:55	WG1183177



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.4		1	10/19/2018 10:26	WG1182859

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.70	J	1.19	3.50	26.75	10/19/2018 07:33	WG1182475
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		10/19/2018 07:33	WG1182475

3 Ss

4 Cn

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000524	0.00131	1	10/20/2018 01:10	WG1183736
Toluene	U		0.00164	0.00654	1	10/20/2018 01:10	WG1183736
Ethylbenzene	U		0.000694	0.00327	1	10/20/2018 01:10	WG1183736
Total Xylenes	U		0.00626	0.00851	1	10/20/2018 01:10	WG1183736
(S) Toluene-d8	111			75.0-131		10/20/2018 01:10	WG1183736
(S) Dibromofluoromethane	103			65.0-129		10/20/2018 01:10	WG1183736
(S) a,a,a-Trifluorotoluene	101			80.0-120		10/20/2018 01:10	WG1183736
(S) 4-Bromofluorobenzene	103			67.0-138		10/20/2018 01:10	WG1183736

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.74	5.24	1	10/20/2018 04:09	WG1183177
Residual Range Organics (RRO)	U		4.36	13.1	1	10/20/2018 04:09	WG1183177
(S) o-Terphenyl	67.7			18.0-148		10/20/2018 04:09	WG1183177



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	92.3		1	10/18/2018 14:16	WG1182843

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	2.33	J	1.05	3.09	28.5	10/18/2018 13:55	WG1182562
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		10/18/2018 13:55	WG1182562

3 Ss

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000459	0.00115	1.06	10/18/2018 12:30	WG1182742
Toluene	0.00180	J	0.00143	0.00574	1.06	10/18/2018 12:30	WG1182742
Ethylbenzene	0.000879	J	0.000609	0.00287	1.06	10/18/2018 12:30	WG1182742
Total Xylenes	U		0.00549	0.00746	1.06	10/18/2018 12:30	WG1182742
(S) Toluene-d8	116			75.0-131		10/18/2018 12:30	WG1182742
(S) Dibromofluoromethane	78.6			65.0-129		10/18/2018 12:30	WG1182742
(S) a,a,a-Trifluorotoluene	82.1			80.0-120		10/18/2018 12:30	WG1182742
(S) 4-Bromofluorobenzene	97.7			67.0-138		10/18/2018 12:30	WG1182742

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		28.8	86.6	20	10/20/2018 01:13	WG1183177
Residual Range Organics (RRO)	123	J	72.1	217	20	10/20/2018 01:13	WG1183177
(S) o-Terphenyl	76.3	J7		18.0-148		10/20/2018 01:13	WG1183177

Sample Narrative:

L1035377-07 WG1183177: Diluted due to matrix.



Method Blank (MB)

(MB) R3352088-1 10/18/18 14:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1035840-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1035840-02 10/18/18 14:16 • (DUP) R3352088-3 10/18/18 14:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	64.5	60.8	1	5.92		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3352088-2 10/18/18 14:16

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3352407-1 10/19/18 10:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1035377-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1035377-01 10/19/18 10:26 • (DUP) R3352407-3 10/19/18 10:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	80.6	80.1	1	0.632		10

Laboratory Control Sample (LCS)

(LCS) R3352407-2 10/19/18 10:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3352460-3 10/19/18 00:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352460-1 10/18/18 23:54 • (LCSD) R3352460-2 10/19/18 00:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.60	5.82	102	106	71.0-124			3.83	20
(S) a,a,a-Trifluorotoluene(FID)				118	120	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351878-5 10/18/18 12:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351878-3 10/18/18 11:49 • (LCSD) R3351878-4 10/18/18 12:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.65	6.17	103	112	71.0-124			8.68	20
(S) a,a,a-Trifluorotoluene(FID)				115	116	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3352642-3 10/21/18 21:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.5			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352642-1 10/21/18 20:29 • (LCSD) R3352642-2 10/21/18 20:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.59	4.93	102	89.6	71.0-124			12.6	20
(S) a,a,a-Trifluorotoluene(FID)				104	103	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351794-2 10/18/18 10:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	117			75.0-131
(S) Dibromofluoromethane	77.7			65.0-129
(S) a,a,a-Trifluorotoluene	81.1			80.0-120
(S) 4-Bromofluorobenzene	92.4			67.0-138

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3351794-1 10/18/18 08:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.132	106	70.0-123	
Ethylbenzene	0.125	0.101	80.4	74.0-126	
Toluene	0.125	0.120	96.0	75.0-121	
Xylenes, Total	0.375	0.306	81.6	72.0-127	
(S) Toluene-d8			107	75.0-131	
(S) Dibromofluoromethane			92.9	65.0-129	
(S) a,a,a-Trifluorotoluene			87.4	80.0-120	
(S) 4-Bromofluorobenzene			93.9	67.0-138	

6 Qc

7 Gl

8 Al

9 Sc

L1034970-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034970-12 10/18/18 18:47 • (MS) R3351794-3 10/18/18 19:06 • (MSD) R3351794-4 10/18/18 19:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.0760	0.0773	60.8	61.9	1	10.0-149			1.66	37
Ethylbenzene	0.125	U	0.0689	0.0654	55.2	52.3	1	10.0-160			5.34	38
Toluene	0.125	U	0.0797	0.0759	63.8	60.7	1	10.0-156			4.99	38
Xylenes, Total	0.375	U	0.209	0.199	55.8	53.0	1	10.0-160			5.10	38
(S) Toluene-d8					113	113		75.0-131				
(S) Dibromofluoromethane					77.2	79.2		65.0-129				
(S) a,a,a-Trifluorotoluene					81.7	81.7		80.0-120				
(S) 4-Bromofluorobenzene					99.5	91.3		67.0-138				



Method Blank (MB)

(MB) R3352485-2 10/19/18 21:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	107			75.0-131
(S) Dibromofluoromethane	112			65.0-129
(S) a,a,a-Trifluorotoluene	104			80.0-120
(S) 4-Bromofluorobenzene	104			67.0-138

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3352485-1 10/19/18 19:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.132	105	70.0-123	
Ethylbenzene	0.125	0.107	85.7	74.0-126	
Toluene	0.125	0.110	87.8	75.0-121	
Xylenes, Total	0.375	0.316	84.3	72.0-127	
(S) Toluene-d8			102	75.0-131	
(S) Dibromofluoromethane			119	65.0-129	
(S) a,a,a-Trifluorotoluene			103	80.0-120	
(S) 4-Bromofluorobenzene			99.7	67.0-138	

L1036367-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1036367-02 10/20/18 03:03 • (MS) R3352485-3 10/20/18 04:00 • (MSD) R3352485-4 10/20/18 04:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.125	0.101	1.33	1.31	123	121	8	10.0-149			1.30	37
Ethylbenzene	0.125	1.41	3.31	3.35	189	194	8	10.0-160	J5	J5	1.24	38
Toluene	0.125	0.529	1.93	1.94	140	141	8	10.0-156			0.772	38
Xylenes, Total	0.375	7.82	15.5	15.6	257	261	8	10.0-160	J5	J5	0.641	38
(S) Toluene-d8					111	112		75.0-131				
(S) Dibromofluoromethane					113	113		65.0-129				
(S) a,a,a-Trifluorotoluene					100	100		80.0-120				
(S) 4-Bromofluorobenzene					116	120		67.0-138				



Method Blank (MB)

(MB) R3352357-1 10/20/18 00:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	78.5			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352357-2 10/20/18 00:46 • (LCSD) R3352357-3 10/20/18 01:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	18.5	18.2	74.0	72.8	50.0-150			1.63	20
Residual Range Organics (RRO)	25.0	15.7	15.1	62.8	60.4	50.0-150			3.90	20
(S) o-Terphenyl				67.3	65.0	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

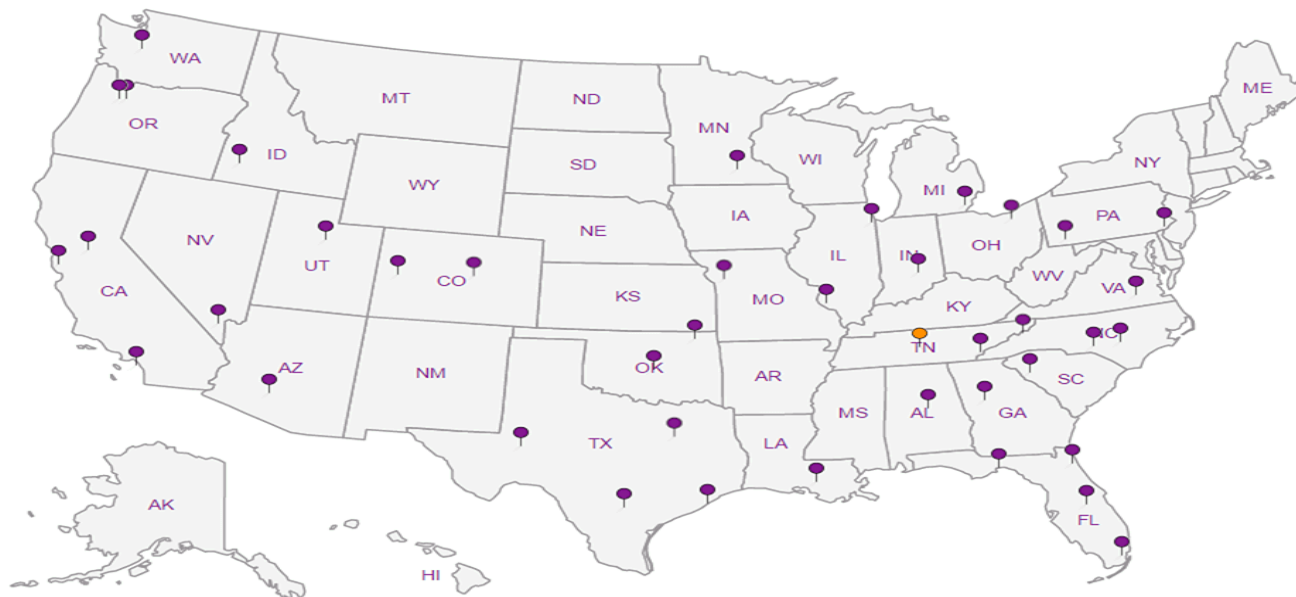
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: **GHD Services Inc.**
 Address: **20818 44th suite 190 Lynnwood, WA 98043**
 Report To: **Matthew.Davis@ghd.com**
 Copy To: **eric.maise@ghd.com**
 Customer Project Name/Number: **P66 Sunnyside 11145922**
 Phone: **425-563-3260**
 Collected By (print): **Eric Maise**
 Collected By (signature): *[Signature]*
 Sample Disposal: Dispose as appropriate Return Archive Hold

Billing Information:
 Email To: **Jeffrey.cloud@ghd.com**
 Site Collection Info/Address:
 State: **WA** County/City: _____ Time Zone Collected: PT MT CT ET
 Compliance Monitoring? Yes No
 DW PWS ID #: _____ DW Location Code: _____
 Immediately Packed on Ice: Yes No
 Field Filtered (if applicable): Yes No
 Analysis: _____

Container Preservative Type: **U 6 6 6 U U U U**
 Lab Project Manager: _____

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:
NWTPH-DX	Lab Sample Receipt Checklist:
NWTPH-6X	Custody Seals Present/Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
BTEX 8260	Custody Signatures Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
VPH	Collector Signatures Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
EPH	Bottles Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Lead 6010	Correct Bottles <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
CPAHS 8270	Sufficient Volume <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Naph, MTBE, EDB, EDL, n-hex	Samples Received on Ice <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	VOA - Headspace Acceptable <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	USDA Regulated Soils <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Samples in Holding Time <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Residual Chlorine Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Cl Strips: _____
	Sample pH Acceptable <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	pH Strips: _____
	Sulfide Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Lead Acetate Strips: _____
	LAB USE ONLY: Lab Sample # / Comments: L1035371

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
S-101618-EM-22-7	SL	G	10/16	9:00				8
S-101618-EM-1B2-14	SL	G		10:00				5
S-101618-EM-29-13	SL	G		10:30				5
S-101618-EM-25-12	SL	G		11:00				8
S-101618-EM-26-7	SL	G		12:00				5
S-101618-EM-1-8	SL	G		13:00				5

Matrix *	NWTPH-DX	NWTPH-6X	BTEX 8260	VPH	EPH	Lead 6010	CPAHS 8270	Naph, MTBE, EDB, EDL, n-hex
S-101618-EM-22-7	X	X	X	X	X	X	X	X
S-101618-EM-1B2-14	X	X	X					
S-101618-EM-29-13	X	X	X	X	X	X	X	X
S-101618-EM-25-12	X	X	X	X	X	X	X	X
S-101618-EM-26-7	X	X	X	X	X	X	X	X
S-101618-EM-1-8	X	X	X	X	X	X	X	X

Customer Remarks / Special Conditions / Possible Hazards:
Hold VPH, EPH, Lead, CPAHS, and non-BTEX 8260 until authorized

Type of Ice Used: Wet Blue Dry None
 SHORT HOLDS PRESENT (<72 hours): Y N/A
 Packing Material Used: _____
 Lab Tracking #: _____
 Radchem sample(s) screened (<500 cpm): Y N NA
 Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) **Eric Maise GHD** Date/Time: **10/16/18 14:30**
 Relinquished by/Company: (Signature) _____ Date/Time: _____
 Relinquished by/Company: (Signature) _____ Date/Time: _____

Date/Time: _____
 Date/Time: _____
 Date/Time: **10/17 8:45**
 Acctnum: _____
 Template: _____
 Prelogin: _____
 PM: _____
 PB: _____
 Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm ID#: **167**
 Cooler 1 Temp Upon Receipt: **21.8** oC
 Cooler 1 Therm Corr. Factor: **1.2** oC
 Cooler 1 Corrected Temp: **3.9** oC
 Comments: _____
 Trip Blank Received: Y N NA
 HCL MeOH TSP Other
 Non Conformance(s): **YES / NO** Page: _____ of: _____

RAD SCREEN: <0.5 mR/hr

D131



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: GHD Services INC.
Address: 20819 4TH AVE SW Suite 190 Lynnwood, WA 98043
Report To: Matthew.davis@ghd.com
Copy To: Eric.Maise@ghd.com

Billing Information:
State: WA **County/City:** **Time Zone Collected:** MPT [] MT [] CT [] ET []

Customer Project Name/Number: P66 Sunnyside 11145922
Phone: 425-563-3260 **Site/Facility ID #:**
Compliance Monitoring? [] Yes [] No

Collected By (print): Eric Maise **Purchase Order #:**
Quote #: **DW PWS ID #:**
Collected By (signature): **Turnaround Date Required:** 24 hr **DW Location Code:**
Sample Disposal: [] Dispose as appropriate [] Return **Rush:** [] Same Day Next Day **Field Filtered (if applicable):** [] Yes No
 [] Archive: [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)
 [] Hold: **Analysis:**

Container Preservative Type **
 U C G U G U U U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses				Lab Profile/Line:	
UWTPH-Dx	UWTPH-Gx	BTEX 8260	EPH	VPH	Lead 6010
				cPATHS 8270	
				Naph, MTBE, EDB, EDC, n-hex	

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA
- Custody Signatures Present Y N NA
- Collector Signature Present Y N NA
- Bottles Intact Y N NA
- Correct Bottles Y N NA
- Sufficient Volume Y N NA
- Samples Received on Ice Y N NA
- VOA - Headspace Acceptable Y N NA
- USDA Regulated Soils Y N NA
- Samples in Holding Time Y N NA
- Residual Chlorine Present Y N NA
- Cl Strips: Y N NA
- Sample pH Acceptable Y N NA
- pH Strips: Y N NA
- Sulfide Present Y N NA
- Lead Acetate Strips: Y N NA

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
S-101518-EM-SP3	SL	6	10/15	1400				5

LAB USE ONLY:
 Lab Sample # / Comments: L1035377

RAD SCREEN: <0.5 mR/hr

Customer Remarks / Special Conditions / Possible Hazards: Hold EPH, VPH, lead, cPATHS and non-BTEX 8260 until authorized

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:

Lab Tracking #:

Radchem sample(s) screened (<500 cpm): Y N NA

Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Eric Maise GHD	10/16/18 14:30		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
		Malik Tisdale	10/17 8:45

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: LL7

Cooler 1 Temp Upon Receipt: 3.8 °C

Cooler 1 Therm Corr. Factor: 70.1 °C

Cooler 1 Corrected Temp: 3.7 °C

Comments:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

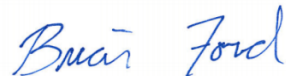
October 30, 2018

GHD - Lynnwood, WA

Sample Delivery Group: L1036839
Samples Received: 10/09/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



S-101018-EM-8-15 L1036839-01 Solid

Collected by: Eric Maisie
 Collected date/time: 10/10/18 11:00
 Received date/time: 10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1180151	1	10/12/18 14:06	10/12/18 14:17	JWW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1185281	1	10/10/18 11:00	10/23/18 21:36	JHH
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1185083	1	10/23/18 16:08	10/24/18 01:25	TD
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1184647	1	10/22/18 18:46	10/23/18 12:24	DMG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1184647	20	10/22/18 18:46	10/23/18 22:17	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

S-100818-EM-6-10 L1036839-02 Solid

Collected by: Eric Maisie
 Collected date/time: 10/08/18 14:00
 Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1178155	1	10/09/18 13:10	10/09/18 13:18	JWW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1178154	1	10/09/18 14:00	10/09/18 17:17	JHH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1184647	1	10/22/18 18:46	10/23/18 12:45	DMG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1184647	20	10/22/18 18:46	10/23/18 21:56	DMG



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.4		1	10/12/2018 14:17	WG1180151

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
n-Hexane	U		0.000370	0.0128	1	10/23/2018 21:36	WG1185281
(S) Toluene-d8	142	<u>J1</u>		75.0-131		10/23/2018 21:36	WG1185281
(S) Dibromofluoromethane	102			65.0-129		10/23/2018 21:36	WG1185281
(S) 4-Bromofluorobenzene	170	<u>J1</u>		67.0-138		10/23/2018 21:36	WG1185281

Polychlorinated Biphenyls (GC) by Method 8082 A

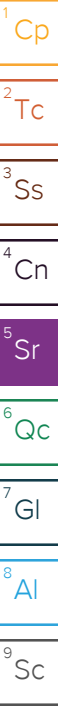
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
PCB 1016	U	<u>J3</u>	0.00446	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1221	U		0.00685	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1232	U		0.00532	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1242	U		0.00406	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1248	U		0.00402	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1254	U		0.00602	0.0217	1	10/24/2018 01:25	WG1185083
PCB 1260	U	<u>J3</u>	0.00630	0.0217	1	10/24/2018 01:25	WG1185083
(S) Decachlorobiphenyl	57.6			10.0-135		10/24/2018 01:25	WG1185083
(S) Tetrachloro-m-xylene	69.3			10.0-139		10/24/2018 01:25	WG1185083

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzo(a)anthracene	0.00375	<u>J</u>	0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Benzo(a)pyrene	U		0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Benzo(b)fluoranthene	0.00130	<u>J</u>	0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Benzo(k)fluoranthene	U		0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Chrysene	0.0159		0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Dibenz(a,h)anthracene	U		0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Indeno(1,2,3-cd)pyrene	U		0.000765	0.00765	1	10/23/2018 12:24	WG1184647
Naphthalene	4.76		0.0510	0.510	20	10/23/2018 22:17	WG1184647
1-Methylnaphthalene	17.5		0.0510	0.510	20	10/23/2018 22:17	WG1184647
2-Methylnaphthalene	20.9		0.0510	0.510	20	10/23/2018 22:17	WG1184647
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		10/23/2018 12:24	WG1184647
(S) Nitrobenzene-d5	1110	<u>J7</u>		14.0-149		10/23/2018 22:17	WG1184647
(S) 2-Fluorobiphenyl	99.2	<u>J7</u>		34.0-125		10/23/2018 22:17	WG1184647
(S) 2-Fluorobiphenyl	122			34.0-125		10/23/2018 12:24	WG1184647
(S) p-Terphenyl-d14	70.6	<u>J7</u>		23.0-120		10/23/2018 22:17	WG1184647
(S) p-Terphenyl-d14	95.2			23.0-120		10/23/2018 12:24	WG1184647

Sample Narrative:

L1036839-01 WG1184647: Low surrogate due to non-target matrix interference.





Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	78.8		1	10/09/2018 13:18	WG1178155

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
n-Hexane	U		0.000368	0.0127	1	10/09/2018 17:17	WG1178154
(S) Toluene-d8	105			75.0-131		10/09/2018 17:17	WG1178154
(S) Dibromofluoromethane	97.7			65.0-129		10/09/2018 17:17	WG1178154
(S) 4-Bromofluorobenzene	131			67.0-138		10/09/2018 17:17	WG1178154

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzo(a)anthracene	0.00155	J	0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Benzo(a)pyrene	U		0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Benzo(b)fluoranthene	U		0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Benzo(k)fluoranthene	U		0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Chrysene	0.00542	J	0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Dibenz(a,h)anthracene	U		0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Indeno(1,2,3-cd)pyrene	U		0.000762	0.00762	1	10/23/2018 12:45	WG1184647
Naphthalene	2.59		0.00254	0.0254	1	10/23/2018 12:45	WG1184647
1-Methylnaphthalene	7.49		0.0508	0.508	20	10/23/2018 21:56	WG1184647
2-Methylnaphthalene	8.06		0.0508	0.508	20	10/23/2018 21:56	WG1184647
(S) Nitrobenzene-d5	659	J1		14.0-149		10/23/2018 12:45	WG1184647
(S) Nitrobenzene-d5	453	J7		14.0-149		10/23/2018 21:56	WG1184647
(S) 2-Fluorobiphenyl	85.1	J7		34.0-125		10/23/2018 21:56	WG1184647
(S) 2-Fluorobiphenyl	114			34.0-125		10/23/2018 12:45	WG1184647
(S) p-Terphenyl-d14	64.0	J7		23.0-120		10/23/2018 21:56	WG1184647
(S) p-Terphenyl-d14	85.6			23.0-120		10/23/2018 12:45	WG1184647

Sample Narrative:

L1036839-02 WG1184647: High surrogate due to non-target matrix interference.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Method Blank (MB)

(MB) R3349190-1 10/09/18 13:18

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1032846-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1032846-06 10/09/18 13:18 • (DUP) R3349190-3 10/09/18 13:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	89.5	89.4	1	0.107		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3349190-2 10/09/18 13:18

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3350312-1 10/12/18 14:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1034126-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1034126-03 10/12/18 14:17 • (DUP) R3350312-3 10/12/18 14:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	83.3	83.2	1	0.206		10

Laboratory Control Sample (LCS)

(LCS) R3350312-2 10/12/18 14:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3349138-2 10/09/18 12:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
n-Hexane	U		0.000290	0.0100
(S) Toluene-d8	103			75.0-131
(S) Dibromofluoromethane	93.7			65.0-129
(S) 4-Bromofluorobenzene	89.2			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3349138-1 10/09/18 12:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
n-Hexane	0.125	0.140	112	55.0-137	
(S) Toluene-d8			99.2	75.0-131	
(S) Dibromofluoromethane			101	65.0-129	
(S) 4-Bromofluorobenzene			85.0	67.0-138	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3353358-2 10/23/18 18:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
n-Hexane	U		0.000290	0.0100
(S) Toluene-d8	103			75.0-131
(S) Dibromofluoromethane	92.7			65.0-129
(S) 4-Bromofluorobenzene	101			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3353358-1 10/23/18 17:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
n-Hexane	0.125	0.137	110	55.0-137	
(S) Toluene-d8			99.4	75.0-131	
(S) Dibromofluoromethane			107	65.0-129	
(S) 4-Bromofluorobenzene			107	67.0-138	

L1036181-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1036181-02 10/24/18 01:37 • (MS) R3353358-3 10/24/18 01:57 • (MSD) R3353358-4 10/24/18 02:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Hexane	0.198	ND	2610	2580	32900	32500	40	10.0-157	E J5	E J5	1.14	37
(S) Toluene-d8					107	104		75.0-131				
(S) Dibromofluoromethane					110	108		65.0-129				
(S) 4-Bromofluorobenzene					114	119		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3353384-1 10/23/18 21:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	83.6			10.0-135
(S) Tetrachloro-m-xylene	83.2			10.0-139

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353384-2 10/23/18 21:19 • (LCSD) R3353384-3 10/23/18 21:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
PCB 1260	0.167	0.129	0.134	77.2	80.2	37.0-145		P	3.80	37
PCB 1016	0.167	0.146	0.158	87.4	94.6	36.0-141			7.89	35
(S) Decachlorobiphenyl				85.6	84.1	10.0-135				
(S) Tetrachloro-m-xylene				77.3	86.3	10.0-139				

L1036839-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1036839-01 10/24/18 01:25 • (MS) R3353384-4 10/24/18 01:39 • (MSD) R3353384-5 10/24/18 01:53

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
PCB 1260	0.213	U	0.120	0.0730	56.5	34.3	1	10.0-160		J3	49.0	38
PCB 1016	0.213	U	0.195	0.124	91.6	58.4	1	10.0-160		J3 P	44.3	37
(S) Decachlorobiphenyl					89.9	46.8		10.0-135				
(S) Tetrachloro-m-xylene					91.6	41.3		10.0-139				



Method Blank (MB)

(MB) R3353054-3 10/23/18 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
<i>(S) Nitrobenzene-d5</i>	80.5			14.0-149
<i>(S) 2-Fluorobiphenyl</i>	79.4			34.0-125
<i>(S) p-Terphenyl-d14</i>	76.0			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353054-1 10/23/18 10:17 • (LCSD) R3353054-2 10/23/18 10:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzo(a)anthracene	0.0800	0.0591	0.0627	73.9	78.4	45.0-120			5.91	20
Benzo(a)pyrene	0.0800	0.0513	0.0562	64.1	70.3	42.0-120			9.12	20
Benzo(b)fluoranthene	0.0800	0.0592	0.0608	74.0	76.0	42.0-121			2.67	20
Benzo(k)fluoranthene	0.0800	0.0591	0.0614	73.9	76.8	49.0-125			3.82	20
Chrysene	0.0800	0.0646	0.0670	80.7	83.8	49.0-122			3.65	20
Dibenz(a,h)anthracene	0.0800	0.0577	0.0607	72.1	75.9	47.0-125			5.07	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0572	0.0604	71.5	75.5	46.0-125			5.44	20
Naphthalene	0.0800	0.0636	0.0615	79.5	76.9	50.0-120			3.36	20
1-Methylnaphthalene	0.0800	0.0702	0.0686	87.8	85.8	51.0-121			2.31	20
2-Methylnaphthalene	0.0800	0.0645	0.0626	80.6	78.3	50.0-120			2.99	20
<i>(S) Nitrobenzene-d5</i>				90.3	76.9	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				88.0	81.2	34.0-125				
<i>(S) p-Terphenyl-d14</i>				79.0	76.3	23.0-120				



L1033884-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033884-01 10/23/18 20:53 • (MS) R3353054-4 10/23/18 21:14 • (MSD) R3353054-5 10/23/18 21:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzo(a)anthracene	0.0858	0.536	1.19	0.572	763	41.2	1	10.0-139	V	J3	70.2	30
Benzo(a)pyrene	0.0858	0.381	0.868	0.400	568	22.5	1	10.0-141	V	J3	73.8	31
Benzo(b)fluoranthene	0.0858	0.491	1.17	0.507	790	18.7	1	10.0-140	V	J3	79.0	36
Benzo(k)fluoranthene	0.0858	0.177	0.387	0.198	245	25.0	1	10.0-137	J5	J3	64.5	31
Chrysene	0.0858	0.496	1.27	0.600	897	121	1	10.0-145	V	J3	71.4	30
Dibenz(a,h)anthracene	0.0858	0.0653	0.171	0.104	123	45.6	1	10.0-132		J3	48.0	31
Indeno(1,2,3-cd)pyrene	0.0858	0.175	0.428	0.200	295	28.8	1	10.0-137	J5	J3	72.8	32
Naphthalene	0.0858	0.0241	0.153	0.0894	151	76.0	1	10.0-135	J5	J3	52.8	27
1-Methylnaphthalene	0.0858	0.0227	0.147	0.0971	145	86.6	1	10.0-142	J5	J3	40.9	28
2-Methylnaphthalene	0.0858	0.0215	0.156	0.0907	156	80.6	1	10.0-137	J5	J3	52.7	28
<i>(S)</i> Nitrobenzene-d5					74.2	66.7		14.0-149				
<i>(S)</i> 2-Fluorobiphenyl					80.1	72.2		34.0-125				
<i>(S)</i> p-Terphenyl-d14					83.9	74.0		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
P	RPD between the primary and confirmatory analysis exceeded 40%.
V	The sample concentration is too high to evaluate accurate spike recoveries.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA



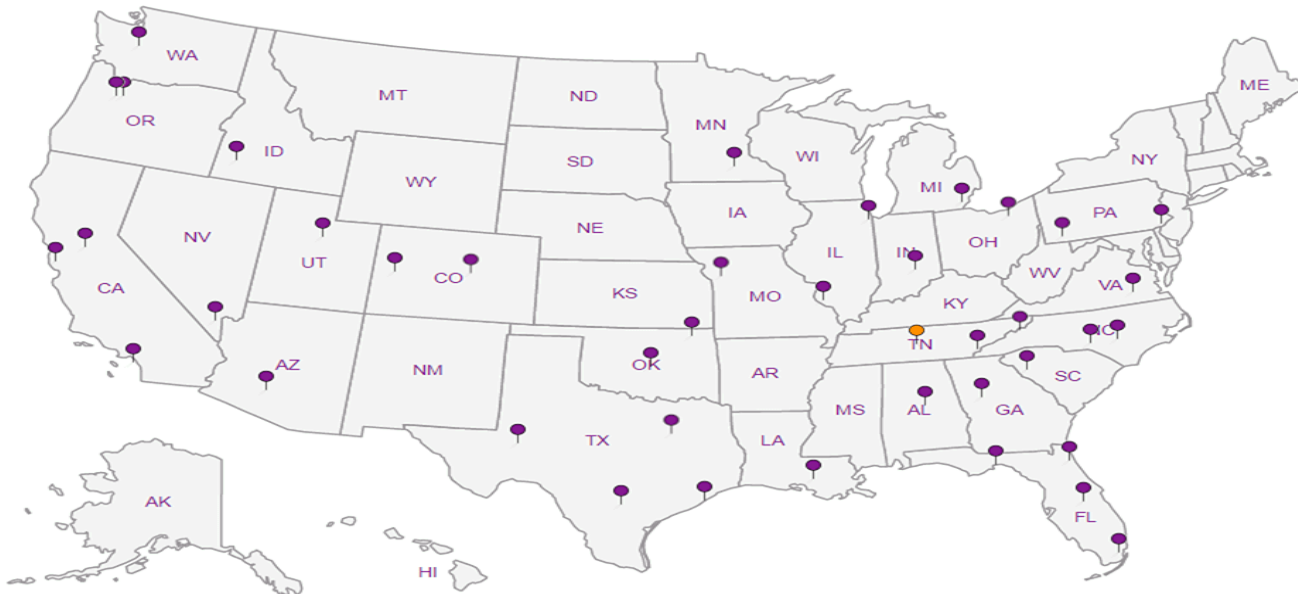
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

H141

Page:

Of:

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GHD Services	Address: 732 Broadway, Suite 301 Tacoma, WA 98402	Report To: Matthew Davis Copy To: eric.maise@ghd.com; jeffrey.cloud@ghd.com	Project Name: P08 Sunnyside Project #: 11145822	Account: Accounts Payable	Company Name: GHD Services
Email: matthew.davis@ghd.com	Phone: 253-607-6217	Purchase Order #	Requested Due Date: 10/11/18 24-hr RUSH	Address: 20818 44th Ave W, Suite 100 Lynnwood, WA 98036	State / Location: WA / Sunnyside
Requested Due Date	Fax:			Regulatory Agency:	
				Pace Project Manager: Jennifer Gross@paceanals.com	Pace Profile #: 39222

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, -, .) Sample ids must be unique	MATRIX CODE (see page 10 of 11) SAMPLE TYPE (S=SRAB, C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION # OF CONTAINERS	Preservatives								Y/N	Analyze Test	Requested Analysis Filtered (Y/N)	Final Use Outcome (Y/N)											
			START	END		Unpreserved	H2SO4	HNO3	HCl	NH4OH	HAc	Methanol	Other					NWTFH-Dr	NWTFH-Gl	ES60 BTEX	ES60 Nonhalogenated	ES60 EDCI	ES60 EDCI	ES60 Lead	ES60 PAH	ES60 PCB	EPH	VPH
			DATE	TIME		DATE	TIME																					
1	S-101018-EM-8-15		10/10/18	1100						X					X	X	X	X	X	X	X	X	X					
2	S-101018-EM-14-13			1300						X					X	X	X	X	X	X	X	X	X	X				
3	S-101018-EM-16-7			1400						X					X	X	X	X	X	X	X	X	X	X				
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

4036839
4034476

Hold EPH, VPH, -01
cPAH, lead and
non-BTEX 260 TO
until authorized

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
RUSH 24 hr TAT	Eric Maise GHD	10/18	1600	K. Cameron	10/12/18	0845	

FedEx H 7831 9154 8012

SAMPLER NAME AND SIGNATURE	DATE Signed
PRINT Name of SAMPLER: Eric Maise	10/10/18 1500
SIGNATURE of SAMPLER: Eric Maise	

see 24 cond 1.0+1=1.1% cost



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

H043

Section A

Required Client Information:

Company: GHD Services
 Address: 732 Broadway, Suite 301
 Tacoma, WA 98402
 Email: matthew.davis@ghd.com
 Phone: 253-607-6217
 Requested Due Date: **24hr TAT**

Section B

Required Project Information:

Report To: Matthew Davis
 Copy To: eric.maise@ghd.com; jeffrey.doust@ghd.com
 Purchase Order #:
 Project Name: P66 Bunnyside
 Project #: 11145922

Section C

Invoice Information:

Attention: Accounts Payable
 Company Name: GHD Services
 Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036
 Pace Quote:
 Pace Project Manager: jennifer.gross@pacelabs.com
 Pace Profile #: 29222

Page: 1 Of 1

Regulatory Agency:
 State / Location:
 WA / Sunnyside

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9, -, .)</small> Sample IDs must be unique	MATRIX CODE <small>(see field notes to left)</small>	COLLECTED	PRESERVATIVES	ANALYTES TEST	REQUESTED ANALYTES FILTERED (Y/N)																						
						START	END	Y/N	Y/N																			
DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	MPH-Dx	MPH-Gx	BTEX	Highboiler	HVOC	MTBE	EDG	EDC	n-Pentane	Lead	dPAH	PCB	EPH	VPH	Residual Chlorine (Y/N)
1	S-100818-EM-TB-14	SL6	10/8 1300					X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	S-100818-EM-SPZ	SL6	10/8 1330					X						X	X	X												
3	S-100818-EM-6-10	SL6	10/8 1400					X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	

L1032874
 L1036839

Hold EPH, VPH, dPAH, lead and non-BTEX -02
 \$260 until approval to analyze

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
RUSH 24hr TAT	Eric Maise GHD	10/8/18	1500	(Signature)	10/9/18	08:35	HR Y Y Y

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Eric Maise
 SIGNATURE of SAMPLER: (Signature)
 DATE Signed: 10/8/18

FedEx # 4486 7788 0737
 RAD SCREEN - 1 hr @ 100°C
 10/9/18 11:15 AM rec. 21 cont

Troy Dunlap

L103 6839

From: Jason Romer
Sent: Thursday, October 18, 2018 2:16 PM
To: Login
Cc: Brian Ford; Benita Miller
Subject: GHDLWA - 2 relogs - one for In-House, one for Subout

Please relog the following two samples as follows. Log as R5 due Wednesday, 10/24

L1034126-01 (S-101018-EM-8-15) - SV8082, SV8270PAHSIMD, V8260HEX and TS (transfer TS)
L1032834-03 (S-100818-EM-6-10) - SV8270PAHSIMD, V8260HEX and TS (transfer TS)

We also need to log both samples to a second SDG# for MISC-SUB (with comment "EPHWA/VPHWA. MDL/RDL. ARI." Log with 22 day TAT from today and \$750/sample.

Thanks,
Jason Romer
Project Manager

Pace Analytical National Center for Testing & Innovation

12065 Lebanon Road | Mt. Juliet, TN 37122

615.773.9713

jromer@pacenational.com | pacenational.com

From: Matthew.Davis@ghd.com [mailto:Matthew.Davis@ghd.com]
Sent: Tuesday, October 16, 2018 4:06 PM
To: Jason Romer
Cc: Eric.Maise@ghd.com
Subject: RE: Pace National Report for 11145922 P66 Sunnyside L1034156

Hi Jason,

We have extra volume held for a number of samples. We would like to analyze samples S-101018-EM-8-15 and S-100818-EM-6-10 for the following:

EPH/VPH
cPAHs & Naphthalenes
n-hexane
PCBs (EM-8-15 only)

Thanks,
Matt

Matthew Davis, LG

GHD

T: +1 253 302 8281 | M: +1 253 507 6217 | E: matthew.davis@ghd.com
732 Broadway Suite 301 Tacoma WA 98402 USA | www.ghd.com

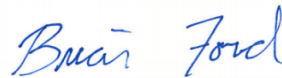
November 09, 2018

GHD - Lynnwood, WA

Sample Delivery Group: L1036840
Samples Received: 10/09/2018
Project Number: 11145922
Description: P66 Sunnyside

Report To: Matthew Davis
20818 44th Ave. W.
Suite 190
Lynnwood, WA 98036

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Cn: Case Narrative	3	² Tc
Gl: Glossary of Terms	4	
Al: Accreditations & Locations	5	³ Cn
Sc: Sample Chain of Custody	6	⁴ Gl
		⁵ Al
		⁶ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Project Narrative

L1036840 -01, -02 contains subout data that is included after the chain of custody.

- ¹ Cp
- ² Tc
- ³ Cn
- ⁴ Gl
- ⁵ Al
- ⁶ Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- ¹ Cp
- ² Tc
- ³ Cn
- ⁴ Gl
- ⁵ Al
- ⁶ Sc

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

1 Cp

2 Tc

3 Cn

4 Gl

5 Al

6 Sc

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

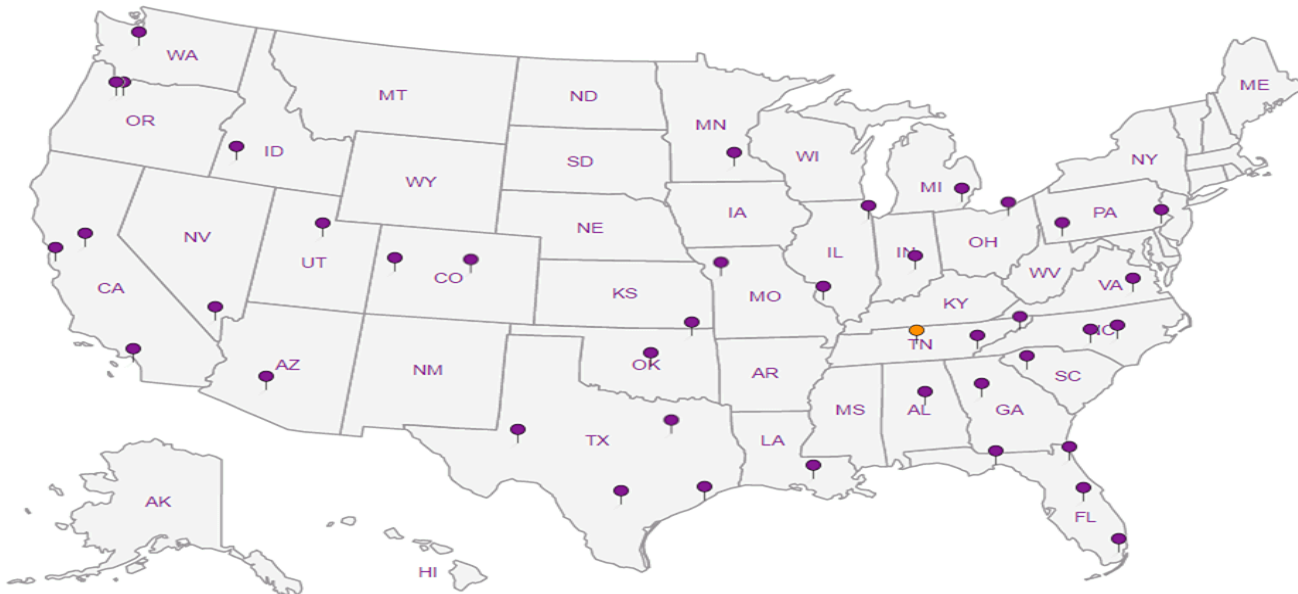
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: GHD Services Address: 732 Broadway, Suite 301 Tacoma, WA 98402 Email: matthew.davis@ghd.com Phone: 253-607-6217 Fax: _____ Requested Due Date: <u>24-hr RUSH</u>	Section B Required Project Information: Report To: Matthew Davis Copy To: eric.maise@ghd.com, jefrey.cloud@ghd.com Purchase Order #: _____ Project Name: P90 Sunnyside Project #: 11145922	Section C Invoice Information: Attention: Accounts Payable Company Name: GHD Services Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036 Face Quote: _____ Pace Project Manager: jennifer.gross@pacewa.com Pace Profile #: 39232	Regulatory Agency: State / Location: WA / Sunnyside
---	--	--	--

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, ., -) Sample IDs must be unique	MATRIX Ground Water Water Waste Water Product Soil Air Other Tissue	CODE DW WT WW P SL GL AP OT TS	MATRIX CODE (see visit codes to use)	SAMPLE TYPE (05-GRAB C-COMPS)	COLLECTED		PRESERVATIVES	ANALYSIS TEST	Y/N	Requested Analysis Filtered (Y/N)	Final Use Criteria (Y/N)								
						START	END						Unpreserved	H2SO4	HNO3	HCl	HNOH	NaOH	Mechanical	Cooler
						DATE	TIME						DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS				
1	S-101018-EM-8-15					10/10	1100													
2	S-101018-EM-14-13						1300													
3	S-101018-EM-16-7						1400													
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

U036840

~~U034126~~

Hold EPH, VPH, cPAH, lead and non-BTEX P260 until authorized

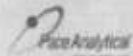
ADDITIONAL COMMENTS <u>RUSH 24 hr TAT</u>	RELINQUISHED BY / AFFILIATION <u>Eric Maise GHD</u>	DATE <u>10/18</u>	TIME <u>1600</u>	ACCEPTED BY / AFFILIATION <u>K. Caine</u>	DATE <u>10/12/18</u>	TIME <u>0849</u>	SAMPLE CONDITIONS
--	--	----------------------	---------------------	--	-------------------------	---------------------	-------------------

FedEx H 7831 9154 8012

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <u>Eric Maise</u> SIGNATURE of SAMPLER: <u>Eric Maise</u>	DATE Signed: <u>10/10/18 1500</u>
---	-----------------------------------

see 24 cond 1.0+1=1.144 CoCst

OK



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

H043

Section A Required Client Information:			Section B Required Project Information:			Section C Invoice Information:		
Company: GHD Services	Report To: Matthew Davis	Address: 732 Broadway, Suite 301 Tacoma, WA 98402	Copy To: eric.maise@ghd.com; jeffrey.abud@ghd.com	Attention: Accounts Payable	Company Name: GHD Services	Address: 20818 44th Ave W, Suite 190 Lynnwood, WA 98036	Pace Quote:	Regulatory Agency:
Email: matthew.davis@ghd.com	Purchase Order #:	Phone: 253-607-4217	Project Name: P68 Bunnyside	Pace Project Manager: jennifer.gross@pacelab.com	State / Location:	WA / Sunnyside		
Requested Due Date: 24 hr TAT	Project #: 11145922			Pace Profile #: 20238				

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9, /, .) Sample IDs must be unique</small>	MATRIX CODE <small>(See user notes to left)</small>	CODE Dns Wt Ww P SL OL WP AR OT TS	COLLECTED				SAMPLE TEMP AT COLLECTION # OF CONTAINERS	Preservatives									Y/N	Requested Analysis Filtered (Y/N)	Facility Choice (Y/N)													
				START		END			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2SO3	Methanol	Other	Analysis Test				MWPT10x	MWPT10k	B500 BTEX	8000 Naphthalene, 14VOC, MTBE	4200 EDB, EDC, p/persistent	4010 LAM	8270 cPAH	R010 PCB	EPH	VPH			
				DATE	TIME	DATE	TIME																										
1	S-100818-EM-TB-14	SL	Dns	10/8	1300					X								X	X	X	X	X	X	X	X	X	X	X			<p style="text-align: right; font-weight: bold; font-size: 1.2em;">L1032874</p> <p style="text-align: right; font-weight: bold; font-size: 1.2em;">L1036840</p> <p>Hold EPH, VPH, cPAH, lead, and ^{or} non-BTEX ^{or} 8260 until approval to analyze</p>		
2	S-100818-EM-SPZ	SL	Dns	10/8	1330				X									X	X	X													
3	S-100818-EM-6-10	SL	Dns	10/8	1400				X									X	X	X	X	X	X	X	X	X	X	X					
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELEASUED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
RUSH 24 hr TAT	Eric Maise GHD	10/8/18	1500	(Signature)	10/9/18	0845	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on []	Custody Sealed (Y/N)	Cooler (Y/N)	Samples intact (Y/N)	IF
PRINT Name of SAMPLER:	SIGNATURE of SAMPLER:						
Eric Maise	(Signature)						
	DATE Signed: 10/8/18						

Fedex # 4486 7788 0737 COSE 10/11/18 rec. 21 cont

RAD SCREEN - 15 mg/hr

L1036840

Troy Dunlap

From: Jason Romer
Sent: Thursday, October 18, 2018 2:16 PM
To: Login
Cc: Brian Ford; Benita Miller
Subject: GHDLWA - 2 relogs - one for In-House, one for Subout

Please relog the following two samples as follows. Log as R5 due Wednesday, 10/24

L1034126-01 (S-101018-EM-8-15) - SV8082, SV8270PAHSIMD, V8260HEX and TS (transfer TS)
L1032834-03 (S-100818-EM-6-10) - SV8270PAHSIMD, V8260HEX and TS (transfer TS)

We also need to log both samples to a second SDG# for MISC-SUB (with comment "EPHWA/VPHWA. MDL/RDL. ARI." Log with 22 day TAT from today and \$750/sample.

Thanks,

Jason Romer
Project Manager

Pace Analytical National Center for Testing & Innovation

12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9713

jromer@pacenational.com | pacenational.com

From: Matthew.Davis@ghd.com [mailto:Matthew.Davis@ghd.com]
Sent: Tuesday, October 16, 2018 4:06 PM
To: Jason Romer
Cc: Eric.Maise@ghd.com
Subject: RE: Pace National Report for 11145922 P66 Sunnyside L1034156

Hi Jason,

We have extra volume held for a number of samples. We would like to analyze samples S-101018-EM-8-15 and S-100818-EM-6-10 for the following:

EPH/VPH
cPAHs & Naphthalenes
n-hexane
PCBs (EM-8-15 only)

Thanks,
Matt

Matthew Davis, LG

GHD

T: +1 253 302 8281 | M: +1 253 507 6217 | E: matthew.davis@ghd.com
732 Broadway Suite 301 Tacoma WA 98402 USA | www.ghd.com



07 November 2018

Benita Miller
Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet, TN 37122

RE: WG1184569

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
18J0415

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



18J0415

Sub-Contract Chain of Custody

Batch Date/Time: 10/22/18 12:30
Sub-Contract Lab: ARI
Address: 4611 S. 134th Pl.
City/State: Tukwila, WA
Contact: N/A

WO: WG1184569
Results Due Date: 11/20/18
ESC Purchase Order #: L1036840
Send Reports to: Benita Miller
Email: SuboutTeam@eselabsiences.com



12065 Lebanon Rd.
Mt. Juliet, TN 37122
call (615)773-9756

Sample ID Container ID	Matrix	State	Collect Date	Description	Sample Number Lab Use Only	Sample Comments Lab Use Only
S-101018-EM- 8-15 26613812	SS	WA	10/10/18 11:00	Miscellaneous Analyses	1. L1036840-01	EPHWA/VPHWA. MDL/RDL. ARI. Relogged from L1034126-01. TD 10/20
S-100818-EM- 6-10 26613813	SS	WA	10/08/18 14:00	Miscellaneous Analyses	2. L1036840-02	EPHWA/VPHWA. MDL/RDL. ARI. Relogged from L1032834-03. TD 10/20

*= Container used for multiple Samples and/or Analyses

Relinquished by: fom Date: 10/21/18
 Recieved by: [Signature] Date: 10/24/18 1004
 Relinquished by: _____ Date: _____
 Recieved by: _____ Date: _____



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-101018-EM-8-15	18J0415-01	Solid	10-Oct-2018 11:00	24-Oct-2018 10:04
S-101018-EM-6-10	18J0415-02	Solid	08-Oct-2018 14:00	24-Oct-2018 10:04



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received October 24, 2018 under ARI work order 18J0415. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatile Petroleum Hydrocarbons - WA-Ecology VPH

Sample S-101018-EM-6-10 was received outside of the 14 day recommended holding time, and has been flagged with "H" qualifiers.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

The LCS/LCSD percent recoveries and RPD were within control limits.

Note that per the method, the C12-C13 Aromatic range for the VPH should only be used when VPH is run without an accompanying EPH method request.

Extractable Organic Hydrocarbons - WA-Ecology

Sample S-101018-EM-8-15 was received with limited remaining hold time and sample S-101018-EM-6-10 was received outside of the 14 day recommended holding time and all have been flagged with "H" qualifiers.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

The LCS percent recoveries were within control limits.



Cooler Receipt Form

ARI Client: Pace Analytical
 COC No(s): _____ NA
 Assigned ARI Job No: 18J0415

Project Name: WB-1184569
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: 962429998058 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 0.5°C
 Time: 1004

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D005206

Cooler Accepted by: JSW Date: 10/24/18 Time: 1004

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA _____

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

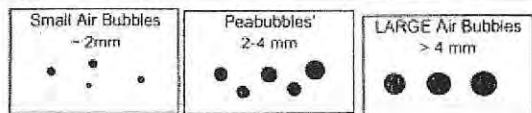
Samples Logged by: SeF Date: 10-24-18 Time: 1553

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
 Peabubbles → "pb" (2 to < 4 mm)
 Large → "lg" (4 to < 6 mm)
 Headspace → "hs" (> 6 mm)



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

S-101018-EM-8-15
18J0415-01 (Solid)

Washington Department of Ecology Methods

Method: WA EPH Sampled: 10/10/2018 11:00
Instrument: FID8 Analyst: JGR Analyzed: 10/30/2018

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)	Sample Size: 10.09 g (wet)	Dry Weight: 7.04 g
	Preparation Batch: BGJ0822	Final Volume: 1 mL	% Solids: 69.79
	Prepared: 26-Oct-2018		
Sample Cleanup:	Cleanup Method: Silica Gel	Initial Volume: 1 mL	
	Cleanup Batch: CGJ0189	Final Volume: 1 mL	
	Cleaned: 29-Oct-2018		

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	464	2840	58500	ug/kg	H
C10-C12 Aliphatics		1	182	2840	1090000	ug/kg	H
C12-C16 Aliphatics		1	247	2840	5140000	ug/kg	H
C16-C21 Aliphatics		1	382	2840	4610000	ug/kg	H
C21-C34 Aliphatics		1	274	2840	528000	ug/kg	H
<i>Surrogate: 1-Chloro-octadecane</i>					30-160 %	72.9 %	H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	665	2840	4730	ug/kg	H
C10-C12 Aromatics		1	382	2840	67100	ug/kg	H
C12-C16 Aromatics		1	206	2840	519000	ug/kg	H
C16-C21 Aromatics		1	851	2840	1200000	ug/kg	H
C21-C34 Aromatics		1	1220	2840	130000	ug/kg	H
<i>Surrogate: o-Terphenyl</i>					30-160 %	98.5 %	H



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

S-101018-EM-8-15
18J0415-01 (Solid)

Washington Department of Ecology Methods

Method: WA VPH

Sampled: 10/10/2018 11:00

Instrument: PID1 Analyst: PC

Analyzed: 10/24/2018

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BGJ0809 Sample Size: 5.43 g (wet) Dry Weight: 4.03 g
Prepared: 24-Oct-2018 Final Volume: 5 mL % Solids: 74.21

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C5-C6 Aliphatics		900	71500	ND	ug/kg	U
C6-C8 Aliphatics		900	71500	ND	ug/kg	U
C8-C10 Aliphatics		900	71500	92600	ug/kg	D
C10-C12 Aliphatics		900	71500	250000	ug/kg	D
C8-C10 Aromatics		900	71500	146000	ug/kg	D
C10-C12 Aromatics		900	71500	564000	ug/kg	D
C12-C13 Aromatics		900	71500	611000	ug/kg	D
Methyl tert-butyl Ether	1634-04-4	900	7150	ND	ug/kg	U
Benzene	71-43-2	900	7150	ND	ug/kg	U
Toluene	108-88-3	900	7150	ND	ug/kg	U
Ethylbenzene	100-41-4	900	7150	ND	ug/kg	U
m,p-Xylene	179601-23-1	900	14300	ND	ug/kg	U
o-Xylene	95-47-6	900	7150	ND	ug/kg	U
1,2,3-Trimethylbenzene	526-73-8	900	7150	ND	ug/kg	U
Naphthalene	91-20-3	900	7150	23000	ug/kg	D
1-Methylnaphthalene	90-12-0	900	7150	60000	ug/kg	D
n-Pentane	109-66-0	900	7150	ND	ug/kg	U
n-Hexane	110-54-3	900	7150	ND	ug/kg	U
n-Octane	111-65-9	900	7150	ND	ug/kg	U
n-Decane	124-18-5	900	7150	ND	ug/kg	U
n-Dodecane	112-40-3	900	7150	31000	ug/kg	D
Surrogate: PID: 2,5-Dibromotoluene			60-140 %	118	%	
Surrogate: FID: 2,5-Dibromotoluene			60-140 %	103	%	



Pace Analytical National Center of Testing
12065 Lebanon Road
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Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

S-101018-EM-6-10
18J0415-02 (Solid)

Washington Department of Ecology Methods

Method: WA EPH Sampled: 10/08/2018 14:00
Instrument: FID8 Analyst: JGR Analyzed: 10/30/2018

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)	Sample Size: 10.07 g (wet)	Dry Weight: 7.80 g
	Preparation Batch: BGJ0822	Final Volume: 1 mL	% Solids: 77.46
	Prepared: 26-Oct-2018		
Sample Cleanup:	Cleanup Method: Silica Gel	Initial Volume: 1 mL	
	Cleanup Batch: CGJ0189	Final Volume: 1 mL	
	Cleaned: 29-Oct-2018		

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	419	2560	6760	ug/kg	H
C10-C12 Aliphatics		1	164	2560	114000	ug/kg	H
C12-C16 Aliphatics		1	223	2560	925000	ug/kg	H
C16-C21 Aliphatics		1	345	2560	935000	ug/kg	H
C21-C34 Aliphatics		1	247	2560	119000	ug/kg	H
<i>Surrogate: 1-Chloro-octadecane</i>					30-160 %	81.7 %	H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	600	2560	603	ug/kg	H, J
C10-C12 Aromatics		1	345	2560	10600	ug/kg	H
C12-C16 Aromatics		1	186	2560	116000	ug/kg	H
C16-C21 Aromatics		1	768	2560	306000	ug/kg	H
C21-C34 Aromatics		1	1100	2560	33400	ug/kg	H
<i>Surrogate: o-Terphenyl</i>					30-160 %	80.4 %	H



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

S-101018-EM-6-10
18J0415-02 (Solid)

Washington Department of Ecology Methods

Method: WA VPH

Sampled: 10/08/2018 14:00

Instrument: PID1 Analyst: PC

Analyzed: 10/24/2018

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BGJ0809 Sample Size: 5.99 g (wet) Dry Weight: 4.60 g
Prepared: 24-Oct-2018 Final Volume: 5 mL % Solids: 76.73

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C5-C6 Aliphatics		900	62600	ND	ug/kg	H, U
C6-C8 Aliphatics		900	62600	ND	ug/kg	H, U
C8-C10 Aliphatics		900	62600	ND	ug/kg	H, U
C10-C12 Aliphatics		900	62600	150000	ug/kg	H, D
C8-C10 Aromatics		900	62600	ND	ug/kg	H, U
C10-C12 Aromatics		900	62600	171000	ug/kg	H, D
C12-C13 Aromatics		900	62600	179000	ug/kg	H, D
Methyl tert-butyl Ether	1634-04-4	900	6260	ND	ug/kg	H, U
Benzene	71-43-2	900	6260	ND	ug/kg	U, H
Toluene	108-88-3	900	6260	ND	ug/kg	H, U
Ethylbenzene	100-41-4	900	6260	ND	ug/kg	H, U
m,p-Xylene	179601-23-1	900	12500	ND	ug/kg	H, U
o-Xylene	95-47-6	900	6260	ND	ug/kg	H, U
1,2,3-Trimethylbenzene	526-73-8	900	6260	ND	ug/kg	U, H
Naphthalene	91-20-3	900	6260	ND	ug/kg	H, U
1-Methylnaphthalene	90-12-0	900	6260	11500	ug/kg	H, D
n-Pentane	109-66-0	900	6260	ND	ug/kg	H, U
n-Hexane	110-54-3	900	6260	ND	ug/kg	H, U
n-Octane	111-65-9	900	6260	ND	ug/kg	H, U
n-Decane	124-18-5	900	6260	12100	ug/kg	H, D
n-Dodecane	112-40-3	900	6260	38400	ug/kg	H, D
Surrogate: PID: 2,5-Dibromotoluene			60-140 %	113	%	H
Surrogate: FID: 2,5-Dibromotoluene			60-140 %	103	%	H



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12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Washington Department of Ecology Methods - Quality Control

Batch BGJ0809 - EPA 5035 (Methanol Extraction)

Instrument: PID1 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGJ0809-BLK1)										
Prepared: 24-Oct-2018 Analyzed: 24-Oct-2018 13:50										
C5-C6 Aliphatics	ND	9000	ug/kg							U
C6-C8 Aliphatics	ND	9000	ug/kg							U
C8-C10 Aliphatics	ND	9000	ug/kg							U
C10-C12 Aliphatics	ND	9000	ug/kg							U
C8-C10 Aromatics	ND	9000	ug/kg							U
C10-C12 Aromatics	ND	9000	ug/kg							U
C12-C13 Aromatics	ND	9000	ug/kg							U
Methyl tert-butyl Ether	ND	900	ug/kg							U
Benzene	ND	900	ug/kg							U
Toluene	ND	900	ug/kg							U
Ethylbenzene	ND	900	ug/kg							U
m,p-Xylene	ND	1800	ug/kg							U
o-Xylene	ND	900	ug/kg							U
1,2,3-Trimethylbenzene	ND	900	ug/kg							U
Naphthalene	ND	900	ug/kg							U
1-Methylnaphthalene	ND	900	ug/kg							U
n-Pentane	ND	900	ug/kg							U
n-Hexane	ND	900	ug/kg							U
n-Octane	ND	900	ug/kg							U
n-Decane	ND	900	ug/kg							U
n-Dodecane	ND	900	ug/kg							U
Surrogate: PID: 2,5-Dibromotoluene	30.6		ug/kg	30.0		102	60-140			
Surrogate: FID: 2,5-Dibromotoluene	31.0		ug/kg	30.0		103	60-140			

LCS (BGJ0809-BS1)										
Prepared: 24-Oct-2018 Analyzed: 24-Oct-2018 12:50										
Methyl tert-butyl Ether	5800	900	ug/kg	5400		107	70-130			
Benzene	6280	900	ug/kg	5400		116	70-130			
Toluene	5810	900	ug/kg	5400		108	70-130			
Ethylbenzene	5200	900	ug/kg	5400		96.3	70-130			
m,p-Xylene	10200	1800	ug/kg	10800		94.2	70-130			
o-Xylene	5260	900	ug/kg	5400		97.3	70-130			
1,2,3-Trimethylbenzene	5440	900	ug/kg	5400		101	70-130			
Naphthalene	5780	900	ug/kg	5400		107	70-130			
1-Methylnaphthalene	5470	900	ug/kg	5400		101	70-130			
n-Pentane	6430	900	ug/kg	5400		119	70-130			



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12065 Lebanon Road
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Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Washington Department of Ecology Methods - Quality Control

Batch BGJ0809 - EPA 5035 (Methanol Extraction)

Instrument: PID1 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BGJ0809-BS1)		Prepared: 24-Oct-2018 Analyzed: 24-Oct-2018 12:50								
n-Hexane	5690	900	ug/kg	5400		105	70-130			
n-Octane	5260	900	ug/kg	5400		97.3	70-130			
n-Decane	5490	900	ug/kg	5400		102	70-130			
n-Dodecane	5380	900	ug/kg	5400		99.7	70-130			
Surrogate: PID: 2,5-Dibromotoluene	32.0		ug/kg	30.0		107	60-140			
Surrogate: FID: 2,5-Dibromotoluene	31.4		ug/kg	30.0		105	60-140			
LCS Dup (BGJ0809-BSD1)		Prepared: 24-Oct-2018 Analyzed: 24-Oct-2018 13:20								
Methyl tert-butyl Ether	5980	900	ug/kg	5400		111	70-130	3.06	30	
Benzene	6340	900	ug/kg	5400		117	70-130	0.86	30	
Toluene	5960	900	ug/kg	5400		110	70-130	2.45	30	
Ethylbenzene	5290	900	ug/kg	5400		98.0	70-130	1.72	30	
m,p-Xylene	10500	1800	ug/kg	10800		96.8	70-130	2.79	30	
o-Xylene	5380	900	ug/kg	5400		99.7	70-130	2.37	30	
1,2,3-Trimethylbenzene	5530	900	ug/kg	5400		102	70-130	1.64	30	
Naphthalene	5920	900	ug/kg	5400		110	70-130	2.46	30	
1-Methylnaphthalene	5630	900	ug/kg	5400		104	70-130	2.92	30	
n-Pentane	6410	900	ug/kg	5400		119	70-130	0.28	30	
n-Hexane	5560	900	ug/kg	5400		103	70-130	2.24	30	
n-Octane	5260	900	ug/kg	5400		97.3	70-130	0.00		
n-Decane	5040	900	ug/kg	5400		93.3	70-130	8.55	30	
n-Dodecane	5170	900	ug/kg	5400		95.7	70-130	4.10	30	
Surrogate: PID: 2,5-Dibromotoluene	31.2		ug/kg	30.0		104	60-140			
Surrogate: FID: 2,5-Dibromotoluene	31.7		ug/kg	30.0		106	60-140			



Pace Analytical National Center of Testing
12065 Lebanon Road
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Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Washington Department of Ecology Methods - Quality Control

Batch BGJ0822 - EPA 3546 (Microwave)

Instrument: FID8 Analyst: JGR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGJ0822-BLK1)											
						Prepared: 26-Oct-2018 Analyzed: 29-Oct-2018 23:22					
C8-C10 Aliphatics	ND	327	2000	ug/kg							U
C10-C12 Aliphatics	ND	128	2000	ug/kg							U
C12-C16 Aliphatics	ND	174	2000	ug/kg							U
C16-C21 Aliphatics	290	269	2000	ug/kg							J
C21-C34 Aliphatics	970	193	2000	ug/kg							J
Surrogate: 1-Chloro-octadecane	11100			ug/kg	15000		73.9	30-160			
Blank (BGJ0822-BLK2)											
						Prepared: 26-Oct-2018 Analyzed: 30-Oct-2018 00:48					
C8-C10 Aromatics	ND	468	2000	ug/kg							U
C10-C12 Aromatics	ND	269	2000	ug/kg							U
C12-C16 Aromatics	ND	145	2000	ug/kg							U
C16-C21 Aromatics	740	599	2000	ug/kg							J
C21-C34 Aromatics	ND	857	2000	ug/kg							U
Surrogate: o-Terphenyl	12300			ug/kg	15000		82.0	30-160			
LCS (BGJ0822-BS1)											
						Prepared: 26-Oct-2018 Analyzed: 29-Oct-2018 23:43					
C8-C10 Aliphatics	3590	327	2000	ug/kg	7500		47.9	30-160			
C10-C12 Aliphatics	4290	128	2000	ug/kg	7500		57.2	30-160			
C12-C16 Aliphatics	5630	174	2000	ug/kg	7500		75.1	30-160			
C16-C21 Aliphatics	6340	269	2000	ug/kg	7500		84.5	30-160			
C21-C34 Aliphatics	6530	193	2000	ug/kg	7500		87.1	30-160			
Surrogate: 1-Chloro-octadecane	11700			ug/kg	15000		77.9	30-160			
LCS (BGJ0822-BS2)											
						Prepared: 26-Oct-2018 Analyzed: 30-Oct-2018 01:09					
C10-C12 Aromatics	4060	269	2000	ug/kg	7500		54.1	30-160			
C12-C16 Aromatics	4750	145	2000	ug/kg	7500		63.3	30-160			
C16-C21 Aromatics	13000	599	2000	ug/kg	15000		86.9	30-160			
C21-C34 Aromatics	6600	857	2000	ug/kg	7500		88.0	30-160			
Surrogate: o-Terphenyl	12800			ug/kg	15000		85.2	30-160			



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Reported:
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Certified Analyses included in this Report

Analyte	Certifications
WA EPH in Solid	
C8-C10 Aliphatics	WADOE,DoD-ELAP,NELAP
C10-C12 Aliphatics	WADOE,DoD-ELAP,NELAP
C12-C16 Aliphatics	WADOE,DoD-ELAP,NELAP
C16-C21 Aliphatics	WADOE,DoD-ELAP,NELAP
C21-C34 Aliphatics	WADOE,DoD-ELAP,NELAP
C8-C10 Aromatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP,WADOE
WA VPH in Solid	
C5-C6 Aliphatics	DoD-ELAP,WADOE
C6-C8 Aliphatics	DoD-ELAP,WADOE
C8-C10 Aliphatics	DoD-ELAP,WADOE
C10-C12 Aliphatics	DoD-ELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,WADOE
C12-C13 Aromatics	DoD-ELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,WADOE
Benzene	DoD-ELAP,WADOE
Toluene	DoD-ELAP,WADOE
Ethylbenzene	DoD-ELAP,WADOE
m,p-Xylene	DoD-ELAP,WADOE
o-Xylene	DoD-ELAP,WADOE
1,2,3-Trimethylbenzene	DoD-ELAP,WADOE
Naphthalene	DoD-ELAP,WADOE
1-Methylnaphthalene	DoD-ELAP,WADOE
n-Pentane	DoD-ELAP
n-Hexane	DoD-ELAP
n-Octane	DoD-ELAP
n-Decane	DoD-ELAP
n-Dodecane	DoD-ELAP
PID: 2,5-Dibromotoluene	WADOE



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	02/07/2019
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-011	05/12/2019
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019



Pace Analytical National Center of Testing
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1184569
Project Number: [none]
Project Manager: Benita Miller

Reported:
07-Nov-2018 12:41

Notes and Definitions

- * Flagged value is not within established control limits.
- D The reported value is from a dilution
- H Hold time violation - Hold time was exceeded.
- J Estimated concentration value detected below the reporting limit.
- U This analyte is not detected above the applicable reporting or detection limit.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.

□ ppendi□ □
Soil Compaction Report



DENSITY OF SOIL AND SOIL-AGGREGATE
IN PLACE BY NUCLEAR METHODS
(SHALLOW DEPTH) (ASTM D-6938)

Environmental Services [] Geotechnical Engineering [] Construction Materials Testing [] Special Inspections

Date: 10/24/2018 MTI File #: Y180018c Project Name: P66 Sunnyside

Contractor: GHD Permit #: _____

Inspector: Leo Perales Weather: Cloudy

Table with 6 columns: Lab ID #, Material #, Material Description, Material Source, Maximum Density (pcf), Optimum Moisture, Standard Used. Row 1: 182404, 1, CSBC, Wappanish Sand and Gravel, 129.5, 7.5, ASTM D1557

Table with 11 columns: Test #, Probe Depth (in), Element and Elevation, Location, Wet Density (pcf), % Moisture, Dry Density (pcf), Material #, Required % Compaction, % Compaction, Pass/Fail. Rows 1-4 show test results for Wall SF/finished grade at various locations.

Method of Testing: BS is Backscatter; Depth in inches is Direct Transmission

Gauge Information:

Table with 10 columns: Gauge #: 49, Make & Model: Troxler 3430, Serial #: 25981, Standard Counts: DS: 1863, MS: 678

Notes:

[Empty box for notes]

The density tests listed herein don't represent the entire fill zone, and are specific to the identified location(s) only. The relevance of these tests with respect to the entire fill zone is dependent on similarity of moisture content, lift thickness, material type, and compactive effort.

Inspector: [Signature] Date: 10/24/2018
Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statute.

[X] This Report is Preliminary. A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

[] This Report is Final. A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.

Reviewed by: _____ Date: _____

NOTICE: Our firm's professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representatives do not relieve any contractor from its obligation to meet contractual requirements. No one except our client may rely on our findings and opinions. The contractor retains sole responsibility for site safety and the methods, operations, and sequences of construction.

Contractor Initials: [Signature] Idaho | Montana | Nevada | Oregon | Utah | Washington | Wyoming
mti@mti-id.com • www.mti-id.com

Appendix F

Waste Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address

Phillips 66
76 Broadway
Sacramento, CA 95818
(916) 558 7633 Attn: Ed Ratson

Generator's Site Address (if different than mailing address)

Phillips 66 - Sunnyside
511 E Lincoln Ave.
Sunnyside, WA 98944

Generator's Phone:

6. Transporter 1 Company Name

DH Environmental, Inc.

U.S. EPA ID Number

WAH000047217

7. Transporter 2 Company Name

Chemical Waste Management of the Northwest

U.S. EPA ID Number

ORD089452353

8. Designated Facility Name and Site Address

Chemical Waste Management of the Northwest
17629 Center Springs Lane
Arlington, OR 97812

U.S. EPA ID Number

ORD089452353

Facility's Phone: (541) 454-2643

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1. Material Not Regulated by DOT (non-reg IDW soil)

01

DM

750

P

2000

2. Material Not Regulated by DOT (non-reg IDW water)

2

DM

800

P

2000

3.

4.

13. Special Handling Instructions and Additional Information

- 1. OR341752 - LF01/STAB01
- 2. OR341753 - STAB01

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Eric Marse on behalf of Phillips 66

Signature

Month Day Year 5 6 19

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Edward J. Warrick

Signature

Month Day Year

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

17b. Alternate Facility (or Generator)

Manifest Reference Number:

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year



February 11, 2019

To: Matthew Davis Ref. No.: 11145922-3RM00
 From: ^{KNC} Kirstin Cordell/ch/1 Tel: 317-291-6636
 Subject: Phillips 66 Company – WR18427 – Sunnyside, WA - Disposal of Soil

Generator Site Information

Facility Name: Phillips 66 Company - Sunnyside Location: 511 East Lincoln Avenue
 RM# 0977 Sunnyside, WA 98944

Waste Stream Information

Profile: 47181814370 Wastestream Name: Soil

Shipping Information

Transporter: Clearcreek Contractors

Disposal Facility Information

Manifest No.: Varies (GHD received 11/1/18) Ship Date: Varies
 Facility: Republic-Roosevelt Regional Landfill Received Date: Varies
 Location: 500 Roosevelt Grade Road
 Roosevelt, WA 99356

Disposal Cost Information

Total Disposal: \$30,637.06 per 901.09 Tons Date Invoice Approved: 11/6/18

Attachment

- | | | | |
|---|-------------------------------------|-------------------------------|-------------------------------------|
| Waste Authorization Letter | <input checked="" type="checkbox"/> | Waste Manifest/Bill of Lading | <input checked="" type="checkbox"/> |
| Weight Tickets | <input checked="" type="checkbox"/> | Waste Profile | <input checked="" type="checkbox"/> |
| Vendor Profile Approval | <input checked="" type="checkbox"/> | Waste Determination Form | <input checked="" type="checkbox"/> |
| Certificate of Destruction (COD)/
Certificate of Recycling (COR) | <input type="checkbox"/> | Field Notes (sampling) | <input checked="" type="checkbox"/> |
| Safety Data Sheets (SDS) | <input type="checkbox"/> | Other: _____ | <input type="checkbox"/> |
| Analytical Data | <input type="checkbox"/> | | |



Ed Ralston
Program Manager
Phillips 66 Remediation Management
76 Broadway
Sacramento, CA 95818
T: 918-588-7633
M: 916-257-3141
E: Ed.C.Ralston@p66.com

June 7, 2018

Jeff Gaarder
GHD Services Inc.
20818 44th Avenue West, Suite 190
Lynnwood, WA 98036

RE: Disposal of wastes on behalf of Phillips 66 Remediation Management (RM)

Dear Mr. Gaarder:

Pursuant to the current Master Services Agreement (CW2276968-MSA) between Phillips 66 and GHD Services Inc. (GHD), GHD is performing certain activities related to the possible management of wastes at RM project sites in California, Washington, and Oregon. These activities may result in the generation of hazardous and/or non-hazardous wastes that must be appropriately managed and transported offsite to a Phillips 66 approved waste management facility for treatment, storage or disposal in compliance with applicable state and federal regulatory requirements.

Phillips 66 Remediation Management Group delegates the limited authority to GHD for the purpose of preparing and signing waste manifests, Land Disposal Restriction Notices (LDR), or shipping papers, subject to the terms and conditions of this agreement and the applicable Master Service Agreement (MSA). Phillips 66 understands and acknowledges that GHD may delegate specified authority to authorized subcontractors; however, GHD's use of subcontractors shall be governed by the applicable provisions of the MSA. Only the GHD company employees identified on the attached list are authorized to sign said documents. Provided GHD fulfills the requirements of the MSA and RM Management System Section 6.2.4 requirements for waste management, Phillips 66 will indemnify, defend and hold harmless GHD, its officers, directors and employees from and against any and all claims, damages, losses, expenses and other liabilities arising from the rights herein granted unless GHD is negligent or willfully wrong in its signing.

The designated contractor employee(s) shall review RM's Management System Section on Waste Management, as well as the Contractor Delegation Process, and follow the procedures described therein. The contractor certifies by signing under "Agreed to" section below, that the designated contractor employee(s) shall have all necessary training to perform this work.

Please return a signed copy of this letter to me signifying agreement with this procedure prior to transporting any waste from Phillips 66 site(s). Upon execution, this letter supersedes and replaces any other waste manifest signatory designation agreements that may have been in place for Remediation Management projects within the States of California, Washington and Oregon. In addition, please upload completed manifests to the appropriate Live Link project file, and verify they have been uploaded.

Thank you for providing this service. If you have any questions, please contact me at 916-588-7633.

Sincerely,

Ed Ralston, Phillips 66 Program Manager

Agreed to:

By: _____ Position: Vice President Date: 6/8/2018

GHD Employees Authorized to Sign Waste Manifests or Shipping Papers

<u>Employee</u>	<u>Certification Expiration</u>
Mohamed Ibrahim	3/2/2019
Bradley Sheldon	1/9/2019
Dan Glaze	10/18/2018
Benjamin Summersett	12/5/2018
Chase Whalen	9/22/2018
Scott Lewis	9/26/2018
Julie Ragains	3/2/2019
Bryan Fong	11/29/2018
Matthew Smith	10/24/2018
Christopher (Brian) Pauley	1/22/2019
Nicholas Alvaro	10/13/2018
Bryan Sandor	11/20/2018
Eric Maise	6/7/2019
Dave Trudeau	6/1/2019
Joseph Lewandowski	6/1/2019

Certification No. W0-18210
Billing Acct. No. 1103914
Product Code 34

BILL OF LADING
- PCS

REGIONAL DISPOSAL COMPANY
54 S. Dawson Street
Seattle, WA 98134
Telephone: (206) 332-7700 / Fax: (206) 332-7600

This Bill of Lading augments the Master Service Agreement ("Agreement") entered into by GHS (Generator/Agent) and Regional Disposal Company ("RDC") on 3/22/18 (date). The terms herein are made a part of the Agreement. In the event of conflict between this Bill of Lading and the Agreement, the terms of the Agreement prevail.

RDC hereby authorizes the Wastes ("Waste") described in Certification No. W0-18210 signed by Generator/Agent on 3/23/18 (date), for disposal at Roosevelt Regional Landfill. Contractor shall present a copy of this Bill of Lading with each shipment delivered.

Location of Waste: 511 East Lincoln Ave., Sunnyside

Method of Shipment: Customer haul

Additional Fees (e.g., laboratory fees, transportation fees, special handling fees, etc. If none, so state):

PERFORMANCE DATE

FOR RDC TRANSPORTATION: Generator shall make the Waste available for shipment no later than _____ (date). RDC shall transport the Waste no later than _____ (date), unless RDC notifies the Generator in writing that Waste transport shall be suspended or canceled due to RDC's exercise of its right to inspect or analyze the Waste (as provided in the Agreement).

FOR GENERATOR TRANSPORTATION: Agent shall begin delivery of the Waste at [check one]:

- Roosevelt Regional Landfill. Seattle Transfer Station located at Third and Lander.

Waste delivery shall begin no later than 3/28/18 (date), and shall complete delivery of the Waste no later than 3/24/19 (date), unless RDC notifies Generator/Agent in writing to suspend or cancel the waste delivery due to RDC's exercise of its right to inspect or analyze the Waste (As provided in the Agreement).

GENERATOR / AGENT

REGIONAL DISPOSAL COMPANY

Eric Maise
Signature

Leslie Whiteman
Signature

Eric Maise on behalf of Phillips 66
Printed Name and Title

Leslie Whiteman
Printed Name and Title

9/10/18
Date

3/28/18
Date

SITE Roosevelt Landfill 509-384-5641 500 Roosevelt Grade Road Roosevelt, WA
CUSTOMER 016394 GHD Services Inc. 6520 Corporate Drive Indianapolis, IN 46278 Contract:LW-18210

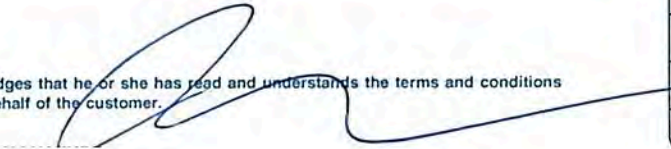
SITE 01	TICKET # 3003739	CELL
WEIGHMASTER Tiffany O.		
DATE/TIME IN 10/3/18 1:50 pm	DATE/TIME OUT 10/3/18 2:21 pm	
VEHICLE GHD	CONTAINER	
REFERENCE truck# 43 Clearcreek		
BILL OF LADING		

SCALE IN GROSS WEIGHT 92,780 NET TONS 25.53
 SCALE OUT TARE WEIGHT 41,720 NET WEIGHT 51,060

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
25.53	tn	PCS 34 Origin:Sunnyside 100%				

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.



NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

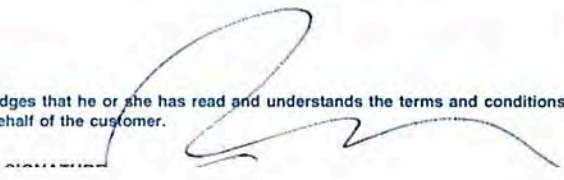
CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003761	
WEIGHMASTER		
DATE/TIME IN	Denise B.	DATE/TIME OUT
VEHICLE	10/5/18 9:10 am	CONTAINER 10/5/18 9:21 am
REFERENCE	GHD	
BILL OF LADING		

SCALE IN GROSS WEIGHT	105,700	NET TONS	31.80	INBOUND
SCALE OUT TARE WEIGHT	42,100	NET WEIGHT	63,600	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
31.80	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract: LW-18210

SITE 01	TICKET # 3003767	CELL
WEIGHMASTER Denise B.		
DATE/TIME IN 10/5/18 2:15 pm	DATE/TIME OUT 10/5/18 2:26 pm	
VEHICLE GHD	CONTAINER	
REFERENCE		
BILL OF LADING		

SCALE IN GROSS WEIGHT 107,160 NET TONS 32.58 INBOUND
 SCALE OUT TARE WEIGHT 42,000 NET WEIGHT 65,160 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
32.58	tn	PCS 34 Origin: Sunnyside 100%				

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

[Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET # 3003773	CELL
WEIGHMASTER Denise B.		
DATE/TIME IN 10/6/18 9:49 am	DATE/TIME OUT 10/6/18 10:03 am	
VEHICLE GHD	CONTAINER	
REFERENCE TRK 43		
BILL OF LADING		

SCALE IN GROSS WEIGHT 110,960 NET TONS 34.37 INBOUND
 SCALE OUT TARE WEIGHT 42,220 NET WEIGHT 68,740 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
34.37	tn	PCS 34 Origin:Sunnyside 100%				



The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003779	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/8/18 10:37 am	10/8/18 10:50 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Trk#43		
BILL OF LADING		

SCALE IN GROSS WEIGHT	103,840	NET TONS	30.64	INBOUND
SCALE OUT TARE WEIGHT	42,560	NET WEIGHT	61,280	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
30.64	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET # 3003781	CELL
WEIGHMASTER Tiffany O.		
DATE/TIME IN 10/8/18 2:02 pm	DATE/TIME OUT 10/8/18 2:13 pm	
VEHICLE GHD	CONTAINER	
REFERENCE Trk # 43		
BILL OF LADING		

SCALE IN GROSS WEIGHT	98,120	NET TONS	28.11	INBOUND
SCALE OUT TARE WEIGHT	41,900	NET WEIGHT	56,220	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
28.11	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

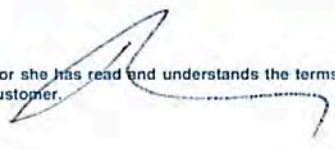
CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003786	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/9/18 9:57 am	10/9/18 10:13 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE	Trk - 43	
BILL OF LADING		

SCALE IN GROSS WEIGHT	99,600	NET TONS	28.58	INBOUND
SCALE OUT TARE WEIGHT	42,440	NET WEIGHT	57,160	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
28.58	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003787	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/9/18 9:43 am	10/9/18 10:15 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Trk - PK2918		
BILL OF LADING		

SCALE IN GROSS WEIGHT	103,040	NET TONS	30.38	INBOUND
SCALE OUT TARE WEIGHT	42,280	NET WEIGHT	60,760	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
30.38	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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_____ *[Signature]*

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003788	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/9/18 9:49 am	10/9/18 10:16 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE	Trk 88	
BILL OF LADING		

SCALE IN GROSS WEIGHT	91,200	NET TONS	28.88	INBOUND
SCALE OUT TARE WEIGHT	33,440	NET WEIGHT	57,760	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
28.88	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

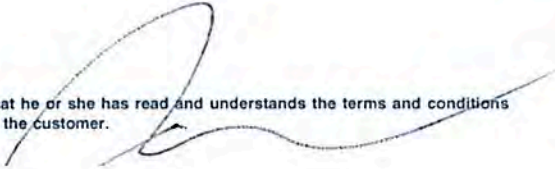
CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003791	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/9/18 1:27 pm	10/9/18 1:39 pm	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Truck #43		
BILL OF LADING		

SCALE IN GROSS WEIGHT	110,080	NET TONS	34.19	INBOUND
SCALE OUT TARE WEIGHT	41,700	NET WEIGHT	68,380	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
34.19	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003792	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/9/18 2:31 pm	10/9/18 2:48 pm	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Trk #PK2918		
BILL OF LADING		

SCALE IN GROSS WEIGHT	116,720	NET TONS	37.27	INBOUND
SCALE OUT TARE WEIGHT	42,180	NET WEIGHT	74,540	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
37.27	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
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SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003794	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/10/18 6:01 am	10/10/18 6:18 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Trk # 88		
BILL OF LADING		

SCALE IN GROSS WEIGHT	100,680	NET TONS	33.46	INBOUND
SCALE OUT TARE WEIGHT	33,760	NET WEIGHT	66,920	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
33.46	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE Roosevelt Landfill 509-384-5641 500 Roosevelt Grade Road Roosevelt, WA	
CUSTOMER 016394 GHD Services Inc. 6520 Corporate Drive Indianapolis, IN 46278 Contract:LW-18210	

SITE	TICKET #	CELL
01	3003801	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/10/18 8:49 am	10/10/18 9:00 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Trk#PK2918		
BILL OF LADING		

SCALE IN GROSS WEIGHT	97,080	NET TONS	27.23	INBOUND
SCALE OUT TARE WEIGHT	42,620	NET WEIGHT	54,460	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
27.23	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

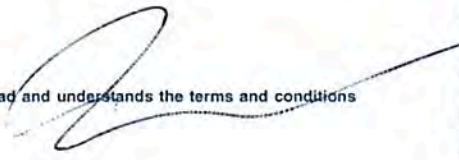
CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET #	3003802	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/10/18	9:04 am	DATE/TIME OUT 10/10/18 9:16 am
VEHICLE	GHD	CONTAINER	
REFERENCE	Trk#43		
BILL OF LADING			

SCALE IN GROSS WEIGHT 99,540 NET TONS 28.63 INBOUND
 SCALE OUT TARE WEIGHT 42,280 NET WEIGHT 57,260 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	TD	Tracking QTY				
28.63	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET # 3003804	CELL
WEIGHMASTER Tiffany O.		
DATE/TIME IN 10/10/18 10:07 am	DATE/TIME OUT 10/10/18 10:27 am	
VEHICLE GHD	CONTAINER	
REFERENCE Trk#88		
BILL OF LADING		

SCALE IN GROSS WEIGHT	99,140	NET TONS	32.84	INBOUND
SCALE OUT TARE WEIGHT	33,460	NET WEIGHT	65,680	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
32.84	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003805	
WEIGHMASTER		
DATE/TIME IN	Tiffany O.	
DATE/TIME OUT		
VEHICLE	10/10/18 12:21 pm	CONTAINER
	GHD	10/10/18 12:49 pm
REFERENCE	Trk#PK2918	
BILL OF LADING		

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
29.90	tn	PCS 34 Origin:Sunnyside 100%				

SCALE IN GROSS WEIGHT 101,300 NET TONS 29.90 INBOUND
 SCALE OUT TARE WEIGHT 41,500 NET WEIGHT 59,800 INVOICE

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

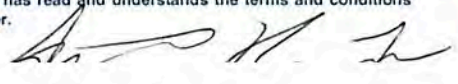
CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET #	3003808	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/11/18 5:58 am	DATE/TIME OUT	10/11/18 6:23 am
VEHICLE	GHD	CONTAINER	
REFERENCE	Trk#88		
BILL OF LADING			

SCALE IN GROSS WEIGHT 96,200 NET TONS 31.26 INBOUND
 SCALE OUT TARE WEIGHT 33,680 NET WEIGHT 62,520 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
31.26	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
GHD Services Inc.
6520 Corporate Drive
Indianapolis, IN 46278
Contract:LW-18210

SITE 01	TICKET #	3003809	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/11/18 7:00 am	DATE/TIME OUT	10/11/18 7:12 am
VEHICLE	GHD	CONTAINER	
REFERENCE	Truck#43		
BILL OF LADING			

SCALE IN GROSS WEIGHT 109,200 NET TONS 33.56 INBOUND
SCALE OUT TARE WEIGHT 42,080 NET WEIGHT 67,120 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
33.56	tn	PCS 34 Origin:Sunnyside 100%				

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[Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
500 Roosevelt Grade Road -Roosevelt, WA

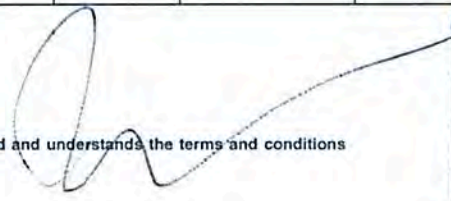
CUSTOMER 016394
GHD Services Inc.
6520 Corporate Drive
Indianapolis, IN 46278
Contract:LW-18210

SITE 01	TICKET # 3003815	CELL
WEIGHMASTER Tiffany O.		
DATE/TIME IN 10/11/18 12:01 pm	DATE/TIME OUT 10/11/18 12:15 pm	
VEHICLE GHD	CONTAINER	
REFERENCE Truck#43		
BILL OF LADING		

SCALE IN GROSS WEIGHT 118,700 NET TONS 38.07 INBOUND
SCALE OUT TARE WEIGHT 42,560 NET WEIGHT 76,140 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
38.07	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
500 Roosevelt Grade Road -Roosevelt, WA

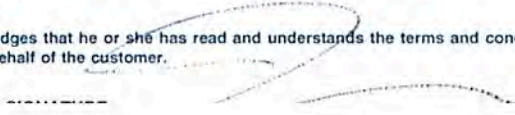
CUSTOMER 016394
GHD Services Inc.
6520 Corporate Drive
Indianapolis, IN 46278
Contract:LW-18210

SITE 01	TICKET # 3003822	CELL
WEIGHMASTER Denise B.		
DATE/TIME IN 10/12/18 9:09 am	DATE/TIME OUT 10/12/18 9:22 am	
VEHICLE GHD	CONTAINER	
REFERENCE TRUCK 43		
BILL OF LADING		

SCALE IN GROSS WEIGHT 95,040 NET TONS 26.38 INBOUND
SCALE OUT TARE WEIGHT 42,280 NET WEIGHT 52,760 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
26.38	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003841	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/15/18 9:08 am	10/15/18 9:21 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
PK2918 - Truck#		
BILL OF LADING		

SCALE IN GROSS WEIGHT	100,440	NET TONS	29.44	
SCALE OUT TARE WEIGHT	41,560	NET WEIGHT	58,880	INBOUND INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
29.44	tn	PCS 34 Origin:Sunnyside 100%				



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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641 500 Roosevelt Grade Road Roosevelt, WA
CUSTOMER 016394 GHD Services Inc. 6520 Corporate Drive Indianapolis, IN 46278 Contract:LW-18210

SITE 01	TICKET # 3003842	CELL
WEIGHMASTER Tiffany G.		
DATE/TIME IN 10/15/18 9:13 am	DATE/TIME OUT 10/15/18 9:25 am	
VEHICLE GHD	CONTAINER	
REFERENCE Truck - 88		
BILL OF LADING		

SCALE IN GROSS WEIGHT 95,240 NET TONS 30.68 INBOUND
 SCALE OUT TARE WEIGHT 33,880 NET WEIGHT 61,360 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
30.68	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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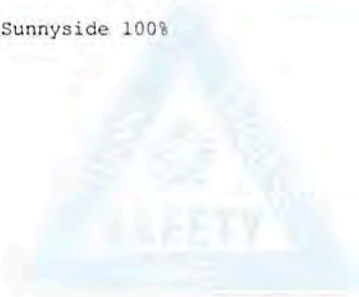
SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003843	
WEIGHMASTER		
DATE/TIME IN	Tiffany O.	
DATE/TIME OUT		
VEHICLE	10/15/18 9:49 am	CONTAINER 10/15/18 10:00 am
REFERENCE	GHD	
BILL OF LADING	Truck#43	

SCALE IN GROSS WEIGHT	100,560	NET TONS	29.11	INBOUND
SCALE OUT TARE WEIGHT	42,340	NET WEIGHT	58,220	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
29.11	tn	PCS 34 Origin:Sunnyside 100%				



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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641 500 Roosevelt Grade Road Roosevelt, WA	
CUSTOMER 016394 GHD Services Inc. 6520 Corporate Drive Indianapolis, IN 46278 Contract:LW-18210	

SITE	TICKET #	CELL
01	3003847	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/15/18 12:22 pm	10/15/18 12:36 pm	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
PK2918 - truck#		
BILL OF LADING		

SCALE IN GROSS WEIGHT 104,240 NET TONS 31.37 INBOUND
SCALE OUT TARE WEIGHT 41,500 NET WEIGHT 62,740 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
31.37	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

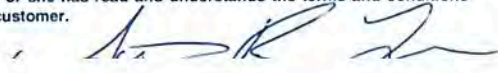
SITE 01	TICKET #	3003848	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/15/18 1:06 pm	DATE/TIME OUT	10/15/18 1:19 pm
VEHICLE	GHD	CONTAINER	
REFERENCE	Trk#88		
BILL OF LADING			

SCALE IN GROSS WEIGHT 97,040 NET TONS 31.34 INBOUND
 SCALE OUT TARE WEIGHT 34,360 NET WEIGHT 62,680 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
31.34	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

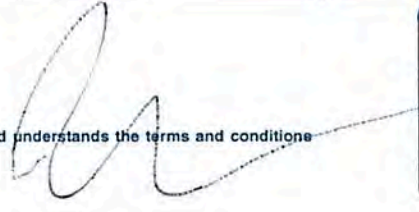
CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET # 3003851	CELL
WEIGHMASTER Tiffany O.		
DATE/TIME IN 10/15/18 1:15 pm	DATE/TIME OUT 10/15/18 1:35 pm	
VEHICLE GHD	CONTAINER	
REFERENCE Trk#43		
BILL OF LADING		

SCALE IN GROSS WEIGHT 101,220 NET TONS 29.45 INBOUND
 SCALE OUT TARE WEIGHT 42,320 NET WEIGHT 58,900 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
29.45	tn	PCS 34 Origin:Sunnyside 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
 Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road Roosevelt, WA

CUSTOMER
 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE	TICKET #	CELL
01	3003855	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/16/18 9:02 am	10/16/18 9:14 am	
VEHICLE	CONTAINER	
GHD		
REFERENCE		
Truck# PK2918		
BILL OF LADING		

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
25.75	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

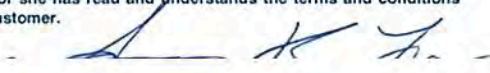
SITE 01	TICKET #	3003858	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/16/18 12:53 pm	DATE/TIME OUT	10/16/18 1:17 pm
VEHICLE	GHD	CONTAINER	
REFERENCE	Truck#88		
BILL OF LADING			

SCALE IN GROSS WEIGHT 94,840 NET TONS 29.62 INBOUND
 SCALE OUT TARE WEIGHT 35,600 NET WEIGHT 59,240 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
29.62	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SITE Roosevelt Landfill 509-384-5641
 500 Roosevelt Grade Road -Roosevelt, WA

CUSTOMER 016394
 GHD Services Inc.
 6520 Corporate Drive
 Indianapolis, IN 46278
 Contract:LW-18210

SITE 01	TICKET #	3003859	CELL
WEIGHMASTER		Tiffany O.	
DATE/TIME IN	10/16/18 12:53 pm	DATE/TIME OUT	10/16/18 1:18 pm
VEHICLE	GHD	CONTAINER	
REFERENCE	Truck#PK2918		
BILL OF LADING			

SCALE IN GROSS WEIGHT 103,940 NET TONS 30.84 INBOUND
 SCALE OUT TARE WEIGHT 42,260 NET WEIGHT 61,680 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
30.84	tn	PCS 34 Origin:Sunnyside 100%				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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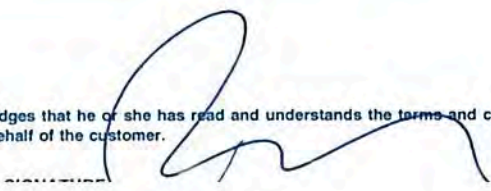
SITE	Roosevelt Landfill 509-384-5641 500 Roosevelt Grade Road Roosevelt, WA
CUSTOMER	016394 GHD Services Inc. 6520 Corporate Drive Indianapolis, IN 46278 Contract:LW-18210

SITE	TICKET #	CELL
01	3003860	
WEIGHMASTER		
Tiffany O.		
DATE/TIME IN	DATE/TIME OUT	
10/16/18 1:20 pm	10/16/18 1:30 pm	
VEHICLE	CONTAINER	
GHD		
REFERENCE	Truck#43	
BILL OF LADING		

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
9.83	tn	PCS 34 Origin:Sunnyside 100%				

SCALE IN GROSS WEIGHT 48,740 NET TONS 9.83 INBOUND INVOICE
 SCALE OUT TARE WEIGHT 29,080 NET WEIGHT 19,660

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NET AMOUNT
TENDERED
CHANGE
CHECK#



Requested Disposal Facility: 4178 Roosevelt Regional MSW L.F. WA

Waste Profile #

4178 18 14370

Sales Rep # 253-leslie W.

I. Generator Information

Generator Name: <u>Phillips 66 Company</u>			
Generator Site Address: <u>511 East Lincoln Avenue</u>			
City: <u>Sunnyside</u>	County: <u>Yakima</u>	State: <u>Washington</u>	Zip: <u>98944</u>
State ID/Reg No: <u>NA</u>	State Approval/Waste Code: <u>NA</u>	(if applicable)	NAICS #: <u>NA</u>
Generator Mailing Address (if different): <u>Phillips 66 Company (76 Broadway)</u>			
City: <u>Sacramento</u>	County: <u>Sacramento</u>	State: <u>California</u>	Zip: <u>95818</u>
Generator Contact Name: <u>Ed Ralston</u>		Email: <u>ed.c.ralston@p66.com</u>	
Phone Number: <u>(916) 558-7633</u>	Ext:	Fax Number:	

II. Billing Information

Bill To: <u>GHD Services Inc.</u>	Contact Name: <u>Kirstin Cordell</u>		
Billing Address: <u>6520 Corporate Drive</u>	Email: <u>kirstin.cordell@ghd.com</u>		
City: <u>Indianapolis</u>	State: <u>IN</u>	Zip: <u>46278</u>	Phone: <u>(317) 291-6636</u>

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris)</small>	<input checked="" type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input checked="" type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input type="checkbox"/> Food Products <small>(including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: Soil excavation in area of historical UST leak

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: <u>250</u> Cubic Yards
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. 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. 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 altered the form or content of this profile sheet as provided by Republic Services, Inc.

<u>Ed Ralston P66 Program Mgr.</u>	<u>Phillips 66 Company</u>
Authorized Representative Name/Title (Type or Print)	Company Name
	<u>Aug 24, 2018</u>
Authorized Representative Signature	Date



Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

LW-18210

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 41781814370	Expiration Date 8/24/2019	
I. Decision Request:	<input checked="" type="checkbox"/> Initial	<input type="checkbox"/> Recertification	<input type="checkbox"/> Change
Disposal Facility: 4178 - Roosevelt Regional MSWL/F			
Generator Name: Phillips 66 Company			
Generator Site Address: 511 East Lincoln Avenue			
City: Sunnyside	County:	State: WA	Zip:
Name of Waste: Diesel Fuel & Home Heating Fuel #1-6			
Estimated Annual Volume: 250 Cubic Yards			

II. Special Waste Department Decision: Approved Rejected

Management Method(s): Landfill Solidification Bioremediation Transfer Facility

Problematic Special Waste according to Republic? Yes No

If yes, which one? _____

Approved by Special Waste Review Committee? Yes No Not Applicable

Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: *Joseph M. Sorokach*
Date: 8/28/2018

Name (Printed): Joseph Sorokach

III. Facility Decision: Approved Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: *[Signature]*
Date: 8/28/2018

Name (Printed): *[Signature]*

FORM MUST BE COMPLETED BEFORE WASTE IS TRANSPORTED

» **UST Exemption:**

»
»
»
»

Repeat Waste Generation with Current and Applicable Waste Determination Form: If a Waste Determination Form was completed on this material within the last 3 years* and there have been no changes in material components or the process generating the material, complete Sections A and B only and file the completed form in the Livelink "Waste Management" folder for the subject site.

Date of most recent complete _____

All Others: If a Waste Determination Form (WDF) has not been completed in the last 3 years* for the material or if the material components or the material generation process has changed since this material was last generated, complete the entire Waste Determination Form. Maintain a copy of the completed form in the Livelink "Waste Management" folder for the subject site.

*State or local regulations may require a waste determination on a more frequent interval. RM uses 3 years as a maximum period.

A. MATERIAL GENERATOR INFORMATION

- 1. RM Site No.: 0977 2. Site Name: Sunnyside 3. SIC Code: 5541
- 4. Site Area Name: _____ 5. Site Address: 511 East Lincoln Avenue
- 6. City: Sunnyside 7. County: Yakima 8. State: WA
- 9. EPA ID No.: NA 10. State ID No.: NA 11. Other ID: NA
- 12. Project Contact Name: Matthew Davis 13. Project Contact Phone No.: (253) 302-8281
- 14. (date material is contained) TBD 15. Date Form Completed: 08/24/2018

B. MATERIAL INFORMATION

- 1. Material Name: Soil
- 2. Material Generation Process: Excavation in area of historical UST leak
- 3. Specific Location of Material at the Site: To be excavated

UST Exemption: Petroleum contaminated media and debris that fail the test for TCLP but are managed under a Federal/State UST Corrective Action program are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(10)). Project file has the necessary analytical data.

E&P Exemption: Petroleum contaminated media and debris generated by drilling fluids, produced waters, and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal energy are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(5)). Project file has the necessary analytical data.

Note: Materials conforming to either of the above two hazardous waste exemptions must still be managed according to RM non-hazardous waste procedures.

Analytical testing results on material attached.

Material is: RCRA Hazardous Non-RCRA Hazardous Non-Hazardous

Section A and B signatures required below:

Prepared by (name and company): Kirstin Cordell Digitally signed by Kirstin Cordell
Date: 2018.08.24 16:15:13 -04'00'

Phillips 66 Company Representative: 

**** Remainder of form need not be completed if the project-related waste conforms to UST or E&P Exemption criteria ****

C. MATERIAL PROFILE

1. Material Type, Specify: Soil

2. Material Generation Frequency: One Time Only Periodic/Routine

3. (mark one only)

- Electronic MSDS/MSDS Number: _____
- Hard Copy (A copy of the MSDS should be submitted along with this completed form).
- No MSDS Available.

4. (mark one only)

- Solid Sludge (20% Solids) Slurry (>5% <20% Solids)
- Mixture Liquid (5% Solids) Compressed Gas

5. Characteristics: % Solids 100 Specific Gravity _____ Flashpoint _____ °F

6. Material description and major components (percent):

Soil = 100%

7. List potential contaminants/materials contacted in process (i.e., lead, benzene/butane, gas oil, etc.):

NA

8. Describe any operational processing of the material (i.e., purged with nitrogen/steam, water washed, etc.):

NA

D. SOLID WASTE DETERMINATION

1. Is the material a solid waste? Yes No (if no, explain below as per 40 CFR 261.2(f))

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.08.24 16:15:44 -04'00'

E. HAZARDOUS WASTE DETERMINATION

Answer the following questions. If the response to question 1, 2, 3, 4, or 5 is "Yes," the waste is hazardous. Indicate if either process knowledge or analytical testing was used to determine each response and attach supporting documentation.	Response		Documented	
	Yes	No	Process	Analysis
1. Is the waste a listed hazardous waste, a mixture of, or derived from a listed waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is the waste Ignitable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Is the waste Corrosive?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Is the waste Reactive?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is the waste Characteristically Toxic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LDR Information:				
6. Is the waste an LDR defined Wastewater (i.e., contains <1% TOC and <1% TSS)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Is the waste an LDR defined Non-Wastewater (i.e., any waste that does not meet the Wastewater definition)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

8. Is the Waste a Hazardous Waste? YES NO *(If the answer is "No" do not complete 1 & 2 of Section F)*

9. If the Waste is Non-Hazardous, identify appropriate Non-Hazardous Waste Category:

- Non-hazardous Industrial Waste
- Innocuous Non-Hazardous Industrial Waste
- Trash

F. RCRA SUBPART CC/NESHAP SUBPART FF DETERMINATION

(Do not complete 1 & 2 of Section F if the waste is non-hazardous)

Answer the following questions. Indicate if either process knowledge or analytical testing was used to determine each response and attach supporting documentation	Response		Documented	
	Yes	No	Process	Analysis
1. Does the waste contain < 500 ppm Volatile Organics (VO) at the point of generation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the waste contain < 20 % hydrocarbons by weight when it is/will be placed in a tank or container?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the waste contain > 10 ppm benzene?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

G. DOT SHIPPING INFORMATION/REACTIVITY AND WASTE COMPATIBILITY

1. *(If No, Skip to 4)* Yes No

2. Reportable Quantity: _____ kgs. 3. Hazard Class/ID: _____


4. USDOT Shipping Name: Non-DOT Regulated

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.08.24 16:16:30 -04'00'

Phillips 66 Company Representative:



PROCESS KNOWLEDGE DOCUMENTATION

Process Knowledge must be fully documented and maintained with the Waste Determination Form. This Knowledge supports the waste classification and why analyses or limited analyses were performed on the waste.

Process Knowledge Checklist (All methods used in the determination)	
<input type="checkbox"/> <i>Material Safety Data Sheet(s):</i>	NA
<input type="checkbox"/> <i>Manufacturer's Literature:</i>	NA
<input type="checkbox"/> <i>Identify chemicals / materials involved in the waste generation process:</i>	NA
<input checked="" type="checkbox"/> <i>Describe the waste generation process:</i>	Excavation in area of historical UST leak
<input type="checkbox"/> <i>Identify potential contaminants:</i>	NA
<input type="checkbox"/> <i>Other documentation generated in conjunction with the waste generation process:</i>	NA
<input type="checkbox"/> <i>Preliminary Analytical Results:</i>	NA
<input checked="" type="checkbox"/> <i>Other Relevant Information:</i>	See attached process knowledge

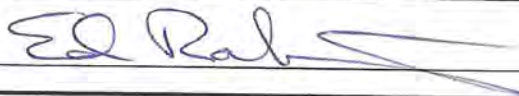
Analytical data must be and are attached.

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.08.24 16:17:17 -04'00'

Phillips 66 Company Representative:



Content Owner:

Official Document Location:

Revision Date: 2012-04-24

Retention:

SAMPLE COLLECTION AND ANALYTICAL DOCUMENTATION

Sample collection and analytical data must be documented and maintained with the Waste Determination Form. This information supports the waste classification by documenting the procedure for collecting representative samples and by identifying the analytical documentation that must be included in the waste determination file with the waste determination form. Complete the following information and attach all supporting documentation.

Sampling Procedures	
Date(s) of sample collection:	NA
Describe the sample location or unit from which the sample was taken (include sample points):	
Describe sample method(s) and equipment used to collect the sample.	
Were Free Liquids Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe sample preparation, collection, and preservation methods:	
Sampling Rationale:	
1. Why do the number, type and location of samples collected represent the waste material?	
2. Why was the analysis limited to the selected parameters?	
Analytical Data Checklist (All Items Attached)	
<input type="checkbox"/>	Analytical results, including QC data.
<input type="checkbox"/>	Listing of analytical methods, including preparatory methods (if used).
<input type="checkbox"/>	Listing of Reporting/Detection Limits.
<input type="checkbox"/>	Name of analytical laboratory used.
<input type="checkbox"/>	Chain-of-Custody form(s).

Prepared by (name and company): Kirstin Cordell Digitally signed by Kirstin Cordell
 Date: 2018.08.24 16:17:53 -04'00'

Site contamination is from a UST heater oil leak in 1989. During cleanup of the UST leak, low level detections of diesel range organics were also found. Historical monitoring data, the most recent collected from the area of excavation in 2013, shows no detections of RCRA or state regulated contaminants. Generator knowledge about the source of contamination and historical monitoring data used to assert a non-hazardous classification. The analytical portion of the WDF is not applicable.

Table 1

Historical Soil Data
Former Union Oil Facility
Phillips 66 Site 0977
511 East Lincoln Avenue
Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (ft bgs)	TPH 418.1 (mg/kg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
MTCA Method A Screening			---	100	2,000	2,000	0.03	7.0	6.0	9.0	0.1
MW-1	3/30/1989	3.5	820	ND	540	---	---	---	---	---	---
MW-2	3/30/1989	8.5	2.5	ND	40	---	---	---	---	---	---
MW-3	3/30/1989	8.5	33,000	<500	23,000	---	---	---	---	---	---
MW-4	3/30/1989	8.5	57	ND	84	---	---	---	---	---	---
MW-5	3/30/1989	3.5	ND	ND	ND	---	---	---	---	---	---
HB-1	3/30/1989	5	1.3	ND	ND	---	---	---	---	---	---
TP-2-S-3	8/25/1989	7.5	230	---	---	---	---	---	---	---	---
TP-3-S-3	8/25/1989	10	14	---	---	---	---	---	---	---	---
TP-4-S-2	8/25/1989	7.5	11	<50	780	---	---	---	---	---	---
TP-4-S-3	8/25/1989	7.5	<1	---	---	---	---	---	---	---	---
TP-5-S-2	8/25/1989	8	15,000	---	---	---	---	---	---	---	---
TP-5-S-3	8/25/1989	10	940	---	---	---	---	---	---	---	---
TP-6-S-1	8/25/1989	8	1.1	---	---	---	---	---	---	---	---
Stockpile	8/25/1989	---	7,000	<50	670	---	---	---	---	---	---
HB-1@3	10/7/1997	3	---	ND	ND	ND	ND	ND	ND	ND	---
HB-2@3	10/7/1997	3	---	ND	ND	ND	ND	ND	ND	ND	---
HB-3@3	10/7/1997	3	---	ND	ND	ND	ND	ND	ND	ND	---
HB-4@3	10/7/1997	3	---	ND	23.3	ND	ND	ND	ND	ND	---
SB-1@5	10/7/1997	5	---	ND	ND	ND	ND	ND	ND	ND	---
SB-2@5	10/7/1997	5	---	ND	ND	ND	ND	ND	ND	ND	---
SB-3@5	10/7/1997	5	---	ND	ND	ND	ND	ND	ND	ND	---
SB-4@5	10/7/1997	5	---	ND	ND	ND	ND	ND	ND	ND	---
SB-5@5	10/7/1997	5	---	ND	ND	ND	ND	ND	ND	ND	---
MW-6-3-7.5	3/19/1999	7.5	---	51	241	<25	<0.05	<0.05	<0.0650	<0.120	<1
MW-6-4-10	3/19/1999	10	---	<5	<10	<25	<0.05	<0.05	<0.0650	<0.100	<1
B-1-8.5	4/1/2001	8.5	---	---	9,150	<1,020	---	---	---	---	---
B-1-14	4/1/2001	14	---	---	45.6	<25	---	---	---	---	---
B-2-8.5	4/1/2001	8.5	---	---	<10	<25	---	---	---	---	---
B-3-8	4/1/2001	8	---	---	<10	<25	---	---	---	---	---
B-4-6.5	4/1/2001	6.5	---	---	<10	<25	---	---	---	---	---
B-5-6	4/1/2001	6	---	---	11.5	44.2	---	---	---	---	---
B-6-6.5	4/1/2001	6.5	---	---	<10	<25	---	---	---	---	---
B-7-7	4/1/2001	7	---	---	<10	<25	---	---	---	---	---
B-8-6.5	4/1/2001	6.5	---	---	<10	<25	---	---	---	---	---
B-9-11	4/1/2001	11	---	---	1,320	61.2	---	---	---	---	---
B-10-7.5	4/1/2001	7.5	---	---	16,200	<1,020	---	---	---	---	---
B-10-10.5	4/1/2001	10.5	---	---	10.2	<25	---	---	---	---	---

Table 1

**Historical Soil Data
Former Union Oil Facility
Phillips 66 Site 0977
511 East Lincoln Avenue
Sunnyside, Washington**

Sample ID	Sample Date	Sample Depth (ft bgs)	TPH 418.1 (mg/kg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
MTCA Method A Screening			---	100	2,000	2,000	0.03	7.0	6.0	9.0	0.1
B-11-8	4/1/2001	8	---	---	164	<25	---	---	---	---	---
P-3-5	10/25/2002	5	---	< 5	14.9	90	< 0.03	< 0.05	< 0.05	< 0.1	---
P-5-8	10/25/2002	8	---	< 5	<10	<25	< 0.03	< 0.05	< 0.05	< 0.1	---
VP-1	08/20/13	1-1.1	---	< 1	< 3.1	< 10	< 0.0050	< 0.0050	< 0.0050	< 0.015	< 0.050
VP-1	08/20/13	3-3.5	---	< 1.4	< 3.6	< 12	< 0.0069	< 0.0069	< 0.0069	< 0.021	< 0.069
VP-1	08/20/13	5-5.5	---	< 1.3	< 3.6	< 12	< 0.0066	< 0.0066	< 0.0066	< 0.020	< 0.066
VP-2	08/21/13	1-1.1	---	< 1.1	< 3.2	< 11	< 0.0054	< 0.0054	< 0.0054	< 0.016	< 0.054
VP-2	08/21/13	3-3.5	---	< 1.3	< 3.6	< 12	< 0.0063	< 0.0063	< 0.0063	< 0.019	< 0.063
VP-2	08/21/13	5-5.5	---	< 1.4	< 3.8	< 13	< 0.0071	< 0.0071	< 0.0071	< 0.021	< 0.071
MW-8	08/20/13	1-1.1	---	2.1	98	< 10	< 0.0057	0.0088	< 0.0057	< 0.017	< 0.057
MW-8	08/20/13	5-5.5	---	< 1.3	< 3.7	< 12	< 0.0063	< 0.0063	< 0.0063	< 0.019	< 0.063
MW-8	08/20/13	9-9.5	---	< 1.1	< 4.0	< 13	< 0.0056	< 0.0056	< 0.0056	< 0.017	< 0.056

NOTES:

Bolded values indicate detected concentrations above MTCA Method A Cleanup Levels

Shaded cells indicate soil was later confirmed clean by samples collected from soil boring MW-6

MTCA = Model Toxics Control Act

No concentrations exceed MTCA Method A Cleanup Levels.

ft bgs = feet below ground surface

mg/kg = Milligrams per kilogram

< = Less than the stated laboratory reporting limit

--- = Not analyzed, not applicable, not sampled

MTBE = Methyl tert-butyl ether

TPH = Total Petroleum Hydrocarbons by EPA Method 418

TPHg = Gasoline range hydrocarbons by Northwest Method NWTPH-Gx (C7-C12).

TPHd = Diesel range hydrocarbons by Northwest Method NWTPH-Gx (C12-C24).

TPHo = Heavy-oil range hydrocarbons by Northwest Method NWTPH-Gx (C24-C40).



February 19, 2019

To: Matthew Davis Ref. No.: 11145922-3RM00
KAC
 From: Kirstin Cordell/ch/1 Tel: 317-291-6636
 Subject: Phillips 66 Company – WR21024 – Sunnyside, WA - Disposal of Groundwater

Generator Site Information

Facility Name: Phillips 66 Company - Sunnyside Location: 511 East Lincoln Avenue
 RM# 0977 Sunnyside, WA 98944

Wastestream Information

Profile: 984268-00 Wastestream Name: Groundwater

Shipping Information

1st Transporter: NRC Environmental Services

Disposal Facility Information

Manifest No.: 451393-18 & 451402-18 (GHD received 11/20/18) Ship Date: 11/8/18
 Facility: Stericycle Received Date: 11/8/18 & 11/12/18
 Location: 20245 77th Avenue S.
 Kent, WA 98032

Disposal Cost Information

Total Disposal: \$4,231.76 per 8138 Gallons Date Invoice Approved: 2/11/19

Attachment

- | | | | |
|---|-------------------------------------|-------------------------------|-------------------------------------|
| Waste Authorization Letter | <input checked="" type="checkbox"/> | Waste Manifest/Bill of Lading | <input checked="" type="checkbox"/> |
| Weight Tickets | <input type="checkbox"/> | Waste Profile | <input checked="" type="checkbox"/> |
| Vendor Profile Approval | <input type="checkbox"/> | Waste Determination Form | <input checked="" type="checkbox"/> |
| Certificate of Destruction (COD)/
Certificate of Recycling (COR) | <input type="checkbox"/> | Field Notes (sampling) | <input type="checkbox"/> |
| Safety Data Sheets (SDS) | <input type="checkbox"/> | Other: _____ | <input type="checkbox"/> |
| Analytical Data | <input checked="" type="checkbox"/> | | |



Ed Ralston
Program Manager
Phillips 66 Remediation Management
76 Broadway
Sacramento, CA 95818
T: 918-588-7633
M: 916-257-3141
E: Ed.C.Ralston@p66.com

June 7, 2018

Jeff Gaarder
GHD Services Inc.
20818 44th Avenue West, Suite 190
Lynnwood, WA 98036

RE: Disposal of wastes on behalf of Phillips 66 Remediation Management (RM)

Dear Mr. Gaarder:

Pursuant to the current Master Services Agreement (CW2276968-MSA) between Phillips 66 and GHD Services Inc. (GHD), GHD is performing certain activities related to the possible management of wastes at RM project sites in California, Washington, and Oregon. These activities may result in the generation of hazardous and/or non-hazardous wastes that must be appropriately managed and transported offsite to a Phillips 66 approved waste management facility for treatment, storage or disposal in compliance with applicable state and federal regulatory requirements.

Phillips 66 Remediation Management Group delegates the limited authority to GHD for the purpose of preparing and signing waste manifests, Land Disposal Restriction Notices (LDR), or shipping papers, subject to the terms and conditions of this agreement and the applicable Master Service Agreement (MSA). Phillips 66 understands and acknowledges that GHD may delegate specified authority to authorized subcontractors; however, GHD's use of subcontractors shall be governed by the applicable provisions of the MSA. Only the GHD company employees identified on the attached list are authorized to sign said documents. Provided GHD fulfills the requirements of the MSA and RM Management System Section 6.2.4 requirements for waste management, Phillips 66 will indemnify, defend and hold harmless GHD, its officers, directors and employees from and against any and all claims, damages, losses, expenses and other liabilities arising from the rights herein granted unless GHD is negligent or willfully wrong in its signing.

The designated contractor employee(s) shall review RM's Management System Section on Waste Management, as well as the Contractor Delegation Process, and follow the procedures described therein. The contractor certifies by signing under "Agreed to" section below, that the designated contractor employee(s) shall have all necessary training to perform this work.

Please return a signed copy of this letter to me signifying agreement with this procedure prior to transporting any waste from Phillips 66 site(s). Upon execution, this letter supersedes and replaces any other waste manifest signatory designation agreements that may have been in place for Remediation Management projects within the States of California, Washington and Oregon. In addition, please upload completed manifests to the appropriate Live Link project file, and verify they have been uploaded.

Thank you for providing this service. If you have any questions, please contact me at 916-588-7633.

Sincerely,

A handwritten signature in black ink that reads "Ed Ralston".

Ed Ralston, Phillips 66 Program Manager

Agreed to:

A handwritten signature in black ink that appears to be "J. Gaarder".

By: _____ Position: Vice President Date: 6/8/2018

GHD Employees Authorized to Sign Waste Manifests or Shipping Papers

<u>Employee</u>	<u>Certification Expiration</u>
Mohamed Ibrahim	3/2/2019
Bradley Sheldon	1/9/2019
Dan Glaze	10/18/2018
Benjamin Summersett	12/5/2018
Chase Whalen	9/22/2018
Scott Lewis	9/26/2018
Julie Ragains	3/2/2019
Bryan Fong	11/29/2018
Matthew Smith	10/24/2018
Christopher (Brian) Pauley	1/22/2019
Nicholas Alvaro	10/13/2018
Bryan Sandor	11/20/2018
Eric Maise	6/7/2019
Dave Trudeau	6/1/2019
Joseph Lewandowski	6/1/2019

3380677

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

CESQG

2. Page 1 of 1

3. Emergency Response Phone

866-812-9565 (LHD)

4. Waste Tracking Number

451393-18

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Phillips 66 Company
76 Broadway Sacramento CA 95818

511 E Lincoln Ave
Sunnyside, WA 98944

Generator's Phone:

6. Transporter 1 Company Name

NRC

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

U.S. EPA ID Number

Stericycle
20245 77th Ave S. Kent, WA 98032

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1. Non-DOT Regulated

1 TT

6300 Lr

2.

12 12

Received

3.

NOV 20 2018

4.

GHD
INDIANAPOLIS

13. Special Handling Instructions and Additional Information

Profile # 984268-00

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year

Eric Maise on behalf of Phillips 66

11 8 18

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Nica Dawson

Nica Dawson

11 8 18

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 7a

Printed/Typed Name

Signature

Month Day Year

Christine Santos

Christine Santos

11 08 18

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

3380677

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address

Phillips 66 Company
76 Broadway Sacramento CA, 95818

Generator's Site Address (if different than mailing address)

511 E Lincoln Ave
Sunnyside, WA 98944

Generator's Phone:

6. Transporter 1 Company Name

NRC

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Stericycle
20245 77th Ave. S. Kent, WA 98032

U.S. EPA ID Number

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1. Non-DOT Regulated

1 TT 5,500 gal

2. Received

3. NOV 20 2018

4. GHD INDIANAPOLIS

13. Special Handling Instructions and Additional Information

Profile # 984268-00

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

Eric Maise on behalf of Phillips 66 Eric Maise

11 8 18

15. International Shipments Import to U.S. Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Jared Chapman

Jared Chapman

4 8 18

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

Christine Santos

Christine Santos

11 12 18

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

Generator's Waste Profile 984268-00



Starts : 15 OCT 2018
Expires : 31 OCT 2019

Sales Rep 5211 NATASHA NEFF
Acct Mngr 5511 James Daly

Status : PENDING

A: GENERATOR (610541) SITE INFORMATION

B: CUSTOMER (53229) INFORMATION

Phillips 66 Company
511 East Lincoln
Sunnyside, WA 98944
> Contact Ed Ralston
TSDF Approval List No

EPA CESQG
NAICS 5171 Neshap N
Phone (310) 522-1168
GHD
2055 NIAGARA FALLS BLVD
NIAGARA FALLS, NY 14304

C: WASTE INFORMATION

On File > MSDS No Analysis Yes Sample

Waste Name NON-REGULATED GROUNDWATER
Process SUBSURFACE INVESTIGATION
Unused Commercial Product No Spill Residue No

D: PHYSICAL CHARACTERISTICS OF WASTE

Phys States	L-Liq	Top Color	various	Odor	None	PH Range	4-10
		Mid Color		Layers	Single Phased	Free Liq %	100
		Bot Color		Spec Grav	.08-1.0	Flash Test	Open Cup
		% Ash	N/A	BTU/Lbs	N/A	Flash Rnge	>200F
		% Water	100%	% Halogens	N/A - Not	Viscosity	Low
						Pumpable	Yes

E: CHEMICAL COMPOSITION OF WASTE

GROUNDWATER (100 %)

PCB's	N/A	Cyanides	N/A	Phenolics	No	Sulfides	N/A	Dioxins	No
TOC	1-10%	VOC	<500PPM					Information Provided By	Generator

F: METALS METHOD

TCLP		Cadmium	<1PPM	Chromium	<5PPM	Silver	<5PPM	Zinc	NA
Arsenic	<5PPM	Merc TCLP	<0.2PPM	Selenium	<1PPM	Nickel	NA	Copper	NA
Barium	<100PPM	Lead	<5PPM	Merc Tot	NA	Thallium	NA	Chrome-6	NA
						Vanadium	NA	Cobalt	NA

G: OTHER CHARACTERISTICS OF WASTE

Ign. Solid	No	Oxidizer	No	Explosive	No	Shock Sensitive	No	Cyanide Reactive	No	Sulfide Reactive	No
Explosive	N/A	Asbestos	N/A			Radioactive	No	Water Reactive	No	Reactive (Other)	No
Herbicides	No	Pesticides	Negative			Ammonia	No	Infectious	No	Medical	No

H: EPA / STATE WASTE IDENTIFICATION

EPA Waste	No	State Waste	No	TSCA	No	Waste Water	No	Universal Waste	No
Form W119	Source G19	Origin 1	SubPart CC No	NESHAPS	No	CERCLA	No	Debris	No
EPA Codes									
State Codes									
UHC									
Categorical Discharge Standards	No			CTW Category	Organics			DW/EHW:	

I: SHIPPING INFORMATION

Marine Pollutant No

Containers	TT Tank Trucks	Qty to Ship Now	G	Projected Volume	1/Onetime
DOT Descrip	NON DOT REGULATED MATERIAL				

J: SPECIAL DISPOSAL INSTRUCTIONS

Waste Categs WATB06

Generator's Waste Profile 984268-00



Starts : 15 OCT 2018
Expires : 31 OCT 2019

Sales Rep 5211 NATASHA NEFF
Acct Mngr 5511 James Daly

Status : PENDING

GENERATOR CERTIFICATION

To the best of my knowledge and belief, I hereby warrant and represent that the information contained and submitted in this waste profile and all attached documents is true, accurate, and complete and that no material fact has been omitted as to make this misleading. I understand that others may rely on this information in the handling and processing of the waste material described herein. By signing this waste profile, I am certifying that I am authorized to sign such documentation on behalf of the generator.



Signature

ED RALSTON
Printed Name

PROGRAM MGR
Title

Nov 5, 2018
Date

Burlington Environmental, LLC maintains the appropriate permits for and will accept the dangerous waste the generator is shipping as required by WAC 173-303-290(3).

 Remediation Management	HSE - Remediation Management	Rev.
	Document Title: RM Management System Section 06.02.04.03 - Waste Determination Form	2.1 Page: 1 of 8

FORM MUST BE COMPLETED BEFORE WASTE IS TRANSPORTED

» UST Exemption:

»
»
»

Repeat Waste Generation with Current and Applicable Waste Determination Form: *If a Waste Determination Form was completed on this material within the last 3 years* and there have been no changes in material components or the process generating the material, complete Sections A and B only and file the completed form in the Livelink "Waste Management" folder for the subject site.*

Date of most recent complete _____

All Others: *If a Waste Determination Form (WDF) has not been completed in the last 3 years * for the material or if the material components or the material generation process has changed since this material was last generated, complete the entire Waste Determination Form. Maintain a copy of the completed form in the Livelink "Waste Management" folder for the subject site.*

**State or local regulations may require a waste determination on a more frequent interval. RM uses 3 years as a maximum period.*

A. MATERIAL GENERATOR INFORMATION

1. RM Site No.: 0977 2. Site Name: _____ 3. SIC Code: 5171
 4. Site Area Name: _____ 5. Site Address: 511 East Lincoln Avenue
 6. City: Sunnyside 7. County: Yakima 8. State: WA
 9. EPA ID No.: NA 10. State ID No.: NA 11. Other ID: NA
 12. Project Contact Name: Matthew Davis 13. Project Contact Phone No.: (253) 302-8281
 14. (date material is contained) 10/15/2018 15. Date Form Completed: 11/02/2018

B. MATERIAL INFORMATION

1. Material Name: Groundwater
 2. Material Generation Process: De-watering in area of historical UST leak
 3. Specific Location of Material at the Site: East Side of Property

UST Exemption: *Petroleum contaminated media and debris that fail the test for TCLP but are managed under a Federal/State UST Corrective Action program are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(10)). Project file has the necessary analytical data.*

E&P Exemption: *Petroleum contaminated media and debris generated by drilling fluids, produced waters, and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal energy are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(5)). Project file has the necessary analytical data.*

Note: *Materials conforming to either of the above two hazardous waste exemptions must still be managed according to RM non-hazardous waste procedures.*

Analytical testing results on material attached.

Material is: RCRA Hazardous Non-RCRA Hazardous Non-Hazardous

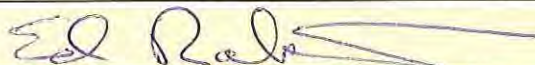
Section A and B signatures required below:

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.11.02 14:18:03 -04'00'

Phillips 66 Company Representative:



**** Remainder of form need not be completed if the project-related waste conforms to UST or E&P Exemption criteria ****

C. MATERIAL PROFILE

1. Material Type, Specify: Groundwater

2. Material Generation Frequency: One Time Only Periodic/Routine

3. (mark one only)

Electronic MSDS/MSDS Number: _____

Hard Copy (A copy of the MSDS should be submitted along with this completed form).

No MSDS Available.

4. (mark one only)

Solid

Sludge (20% Solids)

Slurry (>5% <20% Solids)

Mixture

Liquid (5% Solids)

Compressed Gas

5. Characteristics: % Solids _____ Specific Gravity 1.00 Flashpoint 200 °F

6. Material description and major components (percent):

Groundwater = 100%

7. List potential contaminants/materials contacted in process (i.e., lead, benzene/butane, gas oil, etc.):

BTEX

8. Describe any operational processing of the material (i.e., purged with nitrogen/steam, water washed, etc.):

NA

D. SOLID WASTE DETERMINATION

1. Is the material a solid waste? Yes No (if no, explain below as per 40 CFR 261.2(f))

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.11.02 14:18:39 -04'00'

E. HAZARDOUS WASTE DETERMINATION

Answer the following questions. If the response to question 1, 2, 3, 4, or 5 is "Yes," the waste is hazardous. Indicate if either process knowledge or analytical testing was used to determine each response and attach supporting documentation.	Response		Documented	
	Yes	No	Process	Analysis
1. Is the waste a listed hazardous waste, a mixture of, or derived from a listed waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is the waste Ignitable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Is the waste Corrosive?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Is the waste Reactive?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Is the waste Characteristically Toxic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LDR Information:				
6. Is the waste an LDR defined Wastewater (i.e., contains <1% TOC and <1% TSS)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Is the waste an LDR defined Non-Wastewater (i.e., any waste that does not meet the Wastewater definition)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

8. Is the Waste a Hazardous Waste? YES NO *(If the answer is "No" do not complete 1 & 2 of Section F)*

9. If the Waste is Non-Hazardous, identify appropriate Non-Hazardous Waste Category:

- Non-hazardous Industrial Waste
- Innocuous Non-Hazardous Industrial Waste
- Trash

F. RCRA SUBPART CC/NESHAP SUBPART FF DETERMINATION

(Do not complete 1 & 2 of Section F if the waste is non-hazardous)

Answer the following questions. Indicate if either process knowledge or analytical testing was used to determine each response and <u>attach supporting documentation</u>	Response		Documented	
	Yes	No	Process	Analysis
1. Does the waste contain < 500 ppm Volatile Organics (VO) at the point of generation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the waste contain < 20 % hydrocarbons by weight when it is/will be placed in a tank or container?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the waste contain > 10 ppm benzene?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. DOT SHIPPING INFORMATION/REACTIVITY AND WASTE COMPATIBILITY

1. *(If No, Skip to 4)* Yes No
2. Reportable Quantity: _____ kgs. 3. Hazard Class/ID: _____
4. USDOT Shipping Name: Non-DOT regulated

Prepared by (name and company): Kirstin Cordell Digitally signed by Kirstin Cordell
 Date: 2018.11.02 14:19:11 -04'00'

Phillips 66 Company Representative: 

	HSE - Remediation Management	Rev.
	Document Title: RM Management System Section 06.02.04.03 - Waste Determination Form	2.1 Page: 4 of 8

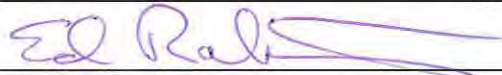
PROCESS KNOWLEDGE DOCUMENTATION


Process Knowledge must be fully documented and maintained with the Waste Determination Form. This Knowledge supports the waste classification and why analyses or limited analyses were performed on the waste.

Process Knowledge Checklist (All methods used in the determination)	
<input type="checkbox"/> <i>Material Safety Data Sheet(s):</i>	NA
<input type="checkbox"/> <i>Manufacturer's Literature:</i>	NA
<input type="checkbox"/> <i>Identify chemicals / materials involved in the waste generation process:</i>	NA
<input checked="" type="checkbox"/> <i>Describe the waste generation process:</i>	De-watering in area of historical UST leak
<input checked="" type="checkbox"/> <i>Identify potential contaminants:</i>	BTEX
<input type="checkbox"/> <i>Other documentation generated in conjunction with the waste generation process:</i>	NA
<input checked="" type="checkbox"/> <i>Preliminary Analytical Results:</i>	Preliminary results show the waste to be non-hazardous.
<input type="checkbox"/> <i>Other Relevant Information:</i>	NA

Analytical data must be and are attached.

Prepared by (name and company): Kirstin Cordell Digitally signed by Kirstin Cordell
 Date: 2018.11.02 14:19:53 -04'00'

Phillips 66 Company Representative: 

	HSE - Remediation Management	Rev.
	Document Title: RM Management System Section 06.02.04.03 - Waste Determination Form	2.1 Page: 5 of 8

SAMPLE COLLECTION AND ANALYTICAL DOCUMENTATION

Sample collection and analytical data must be documented and maintained with the Waste Determination Form. This information supports the waste classification by documenting the procedure for collecting representative samples and by identifying the analytical documentation that must be included in the waste determination file with the waste determination form. Complete the following information and attach all supporting documentation.

Sampling Procedures	
<i>Date(s) of sample collection:</i>	8/27/18
<i>Describe the sample location or unit from which the sample was taken (include sample points):</i>	Grab sample collected from a monitoring well within the area of de-watering.
<i>Describe sample method(s) and equipment used to collect the sample.</i>	Sample was collected using proper equipment and PPE.
<i>Were Free Liquids Present?</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>Describe sample preparation, collection, and preservation methods:</i>	Sample was placed in a cooler, sealed, and transported directly to the lab.
Sampling Rationale:	
<i>1. Why do the number, type and location of samples collected represent the waste material?</i>	Sample is representative because it was collected from a monitoring well within the area of de-watering.
<i>2. Why was the analysis limited to the selected parameters?</i>	Analysis is limited to the site COCs (BTEX); analytical results eliminate the concern for D018.
Analytical Data Checklist (All Items Attached)	
<input checked="" type="checkbox"/>	<i>Analytical results, including QC data.</i>
<input checked="" type="checkbox"/>	<i>Listing of analytical methods, including preparatory methods (if used).</i>
<input checked="" type="checkbox"/>	<i>Listing of Reporting/Detection Limits.</i>
<input checked="" type="checkbox"/>	<i>Name of analytical laboratory used.</i>
<input checked="" type="checkbox"/>	<i>Chain-of-Custody form(s).</i>

Prepared by (name and company):

Kirstin Cordell

Digitally signed by Kirstin Cordell
Date: 2018.11.02 14:20:41 -04'00'

September 05, 2018

Matthew Davis
GHD Services Inc.
732 Broadway
Suite 301
Tacoma, WA 98402

RE: Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

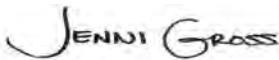
Dear Matthew Davis:

Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Jeffrey Cloud, GHD Services Inc.
Eric Maise, GHD Services Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #:74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10445164001	GW-11145922-082718-EM-WW	Water	08/27/18 14:00	08/28/18 09:55

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SAMPLE ANALYTE COUNT

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10445164001	GW-11145922-082718-EM-WW	NWTPH-Dx	JVM	4	PASI-M
		NWTPH-Gx	AG1	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D	SNG	18	PASI-M
		EPA 8260B	DS2	14	PASI-M

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Date: September 05, 2018

The Eurofins Lancaster samples were received outside of the required temperature range. Analysis was completed upon client approval.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: NWTPH-Dx

Description: NWTPH-Dx GCS LV

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for NWTPH-Dx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA Mod. 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 559762

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- DUP (Lab ID: 3038727)
 - n-Triacontane (S)
 - o-Terphenyl (S)
- GW-11145922-082718-EM-WW (Lab ID: 10445164001)
 - n-Triacontane (S)
 - o-Terphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: NWTPH-Gx

Description: NWTPH-Gx GCV

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for NWTPH-Gx. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: EPA 6010D

Description: 6010D MET ICP, TCLP

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: EPA 7470A

Description: 7470A Mercury, TCLP

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: EPA 8270D

Description: 8270D MSSV TCLP

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 560062

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10445164001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3040174)
 - 1,4-Dichlorobenzene
 - Hexachloroethane
 - Pyridine
- MSD (Lab ID: 3040175)
 - 1,4-Dichlorobenzene
 - Hexachloroethane
 - Pyridine

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: EPA 8270D

Description: 8270D MSSV TCLP

Client: GHD Services Inc

Date: September 05, 2018

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Method: EPA 8260B

Description: 8260B MSV TCLP

Client: GHD Services Inc

Date: September 05, 2018

General Information:

1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Sample: GW-11145922-082718-EM-WW **Lab ID:** 10445164001 Collected: 08/27/18 14:00 Received: 08/28/18 09:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV								
Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C								
Diesel Fuel Range	100	mg/L	4.3	10	08/29/18 13:35	09/02/18 11:08	68334-30-5	
Motor Oil Range	5.6	mg/L	4.3	10	08/29/18 13:35	09/02/18 11:08		
Surrogates								
o-Terphenyl (S)	0	%	50-150	10	08/29/18 13:35	09/02/18 11:08	84-15-1	S4
n-Triacontane (S)	0	%	50-150	10	08/29/18 13:35	09/02/18 11:08	638-68-6	S4
NWTPH-Gx GCV								
Analytical Method: NWTPH-Gx								
TPH as Gas	5900	ug/L	1000	10		09/05/18 10:01		G+,G-
Surrogates								
a,a,a-Trifluorotoluene (S)	85	%	50-150	10		09/05/18 10:01	98-08-8	
6010D MET ICP, TCLP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 08/30/18 09:18								
Arsenic	ND	mg/L	0.10	1	08/30/18 12:05	08/31/18 09:26	7440-38-2	
Barium	ND	mg/L	0.50	1	08/30/18 12:05	08/31/18 09:26	7440-39-3	
Cadmium	ND	mg/L	0.015	1	08/30/18 12:05	08/31/18 09:26	7440-43-9	
Chromium	ND	mg/L	0.050	1	08/30/18 12:05	08/31/18 09:26	7440-47-3	
Lead	ND	mg/L	0.050	1	08/30/18 12:05	08/31/18 09:26	7439-92-1	
Selenium	ND	mg/L	0.10	1	08/30/18 12:05	08/31/18 09:26	7782-49-2	
Silver	ND	mg/L	0.050	1	08/30/18 12:05	08/31/18 09:26	7440-22-4	
7470A Mercury, TCLP								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Leachate Method/Date: EPA 1311; 08/30/18 09:18								
Mercury	ND	ug/L	0.60	1	08/30/18 14:15	08/30/18 15:43	7439-97-6	
8270D MSSV TCLP								
Analytical Method: EPA 8270D Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 08/30/18 10:07								
1,4-Dichlorobenzene	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	106-46-7	M1
2,4-Dinitrotoluene	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	87-68-3	
Hexachlorobenzene	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	118-74-1	
Hexachloroethane	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	67-72-1	M1
2-Methylphenol(o-Cresol)	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47		
Nitrobenzene	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	98-95-3	
Pentachlorophenol	ND	ug/L	200	1	08/30/18 19:16	09/03/18 01:47	87-86-5	
Pyridine	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	110-86-1	M1
2,4,5-Trichlorophenol	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	1	08/30/18 19:16	09/03/18 01:47	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	84	%	56-125	1	08/30/18 19:16	09/03/18 01:47	4165-60-0	
2-Fluorobiphenyl (S)	77	%	45-125	1	08/30/18 19:16	09/03/18 01:47	321-60-8	
p-Terphenyl-d14 (S)	85	%	50-125	1	08/30/18 19:16	09/03/18 01:47	1718-51-0	
Phenol-d6 (S)	53	%	30-125	1	08/30/18 19:16	09/03/18 01:47	13127-88-3	
2-Fluorophenol (S)	61	%	30-125	1	08/30/18 19:16	09/03/18 01:47	367-12-4	
2,4,6-Tribromophenol (S)	83	%	58-125	1	08/30/18 19:16	09/03/18 01:47	118-79-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Sample: GW-11145922-082718-EM-WW **Lab ID:** 10445164001 Collected: 08/27/18 14:00 Received: 08/28/18 09:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV TCLP		Analytical Method: EPA 8260B Leachate Method/Date: EPA 1311; 08/31/18 11:22						
Benzene	ND	ug/L	25.0	1		08/31/18 17:42	71-43-2	
2-Butanone (MEK)	ND	ug/L	125	1		08/31/18 17:42	78-93-3	
Carbon tetrachloride	ND	ug/L	25.0	1		08/31/18 17:42	56-23-5	
Chlorobenzene	ND	ug/L	25.0	1		08/31/18 17:42	108-90-7	
Chloroform	ND	ug/L	25.0	1		08/31/18 17:42	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	25.0	1		08/31/18 17:42	106-46-7	
1,2-Dichloroethane	ND	ug/L	25.0	1		08/31/18 17:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	1		08/31/18 17:42	75-35-4	
Tetrachloroethene	ND	ug/L	25.0	1		08/31/18 17:42	127-18-4	
Trichloroethene	ND	ug/L	10.0	1		08/31/18 17:42	79-01-6	
Vinyl chloride	ND	ug/L	5.0	1		08/31/18 17:42	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		08/31/18 17:42	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		08/31/18 17:42	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/31/18 17:42	460-00-4	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

QC Batch: 560696 Analysis Method: NWTPH-Gx
QC Batch Method: NWTPH-Gx Analysis Description: NWTPH-Gx Water
Associated Lab Samples: 10445164001

METHOD BLANK: 3044008 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	09/05/18 05:43	
a,a,a-Trifluorotoluene (S)	%.	90	50-150	09/05/18 05:43	

LABORATORY CONTROL SAMPLE & LCSD: 3044009

3044010

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	950	1030	95	103	41-137	8	20	
a,a,a-Trifluorotoluene (S)	%.				93	93	50-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3044034

3044035

Parameter	Units	10445841022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH as Gas	ug/L	395	1000	1000	1340	1440	95	105	30-145	7	30	
a,a,a-Trifluorotoluene (S)	%.						95	92	50-150			

SAMPLE DUPLICATE: 3044036

Parameter	Units	10445841024 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	2540	2550	0	30	G+,G-
a,a,a-Trifluorotoluene (S)	%.	100	100	0		

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

QC Batch: 559980 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury TCLP
Associated Lab Samples: 10445164001

METHOD BLANK: 3039730 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	08/30/18 15:29	

METHOD BLANK: 3038324 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	08/30/18 16:31	

LABORATORY CONTROL SAMPLE: 3039731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.6	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3039732 3039733

Parameter	Units	10444191001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.0012 mg/L	15	15	18.0	16.7	112	103	80-120	7	20	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

QC Batch: 559978 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D TCLP
Associated Lab Samples: 10445164001

METHOD BLANK: 3039716 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.10	08/31/18 09:13	
Barium	mg/L	ND	0.50	08/31/18 09:13	
Cadmium	mg/L	ND	0.015	08/31/18 09:13	
Chromium	mg/L	ND	0.050	08/31/18 09:13	
Lead	mg/L	ND	0.050	08/31/18 09:13	
Selenium	mg/L	ND	0.10	08/31/18 09:13	
Silver	mg/L	ND	0.050	08/31/18 09:13	

METHOD BLANK: 3038324 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.10	08/31/18 10:05	
Barium	mg/L	ND	0.50	08/31/18 10:05	
Cadmium	mg/L	ND	0.015	08/31/18 10:05	
Chromium	mg/L	ND	0.050	08/31/18 10:05	
Lead	mg/L	ND	0.050	08/31/18 10:05	
Selenium	mg/L	ND	0.10	08/31/18 10:05	
Silver	mg/L	ND	0.050	08/31/18 10:05	

LABORATORY CONTROL SAMPLE: 3039717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	5	5.0	100	80-120	
Barium	mg/L	5	5.1	102	80-120	
Cadmium	mg/L	5	5.2	103	80-120	
Chromium	mg/L	5	5.0	101	80-120	
Lead	mg/L	5	5.0	99	80-120	
Selenium	mg/L	5	5.4	108	80-120	
Silver	mg/L	2.5	2.6	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3039718 3039719

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Arsenic	mg/L	ND	5	5	5.0	4.9	100	98	75-125	2	30

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Parameter	Units	10445140002		3039718		3039719		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec								
Barium	mg/L	750 ug/L	5	5	6.0	5.7	105	100	75-125	4	30				
Cadmium	mg/L	ND	5	5	5.1	5.0	103	100	75-125	3	30				
Chromium	mg/L	ND	5	5	5.0	4.9	99	97	75-125	2	30				
Lead	mg/L	ND	5	5	4.9	4.8	98	96	75-125	2	30				
Selenium	mg/L	ND	5	5	5.3	5.2	107	105	75-125	2	30				
Silver	mg/L	ND	2.5	2.5	2.6	2.6	105	103	75-125	2	30				

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

QC Batch: 560310 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV TCLP
Associated Lab Samples: 10445164001

METHOD BLANK: 3041888 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	08/31/18 15:34	
1,2-Dichloroethane	ug/L	ND	25.0	08/31/18 15:34	
1,4-Dichlorobenzene	ug/L	ND	25.0	08/31/18 15:34	
2-Butanone (MEK)	ug/L	ND	125	08/31/18 15:34	
Benzene	ug/L	ND	25.0	08/31/18 15:34	
Carbon tetrachloride	ug/L	ND	25.0	08/31/18 15:34	
Chlorobenzene	ug/L	ND	25.0	08/31/18 15:34	
Chloroform	ug/L	ND	25.0	08/31/18 15:34	
Tetrachloroethene	ug/L	ND	25.0	08/31/18 15:34	
Trichloroethene	ug/L	ND	10.0	08/31/18 15:34	
Vinyl chloride	ug/L	ND	5.0	08/31/18 15:34	
1,2-Dichloroethane-d4 (S)	%	101	75-125	08/31/18 15:34	
4-Bromofluorobenzene (S)	%	99	75-125	08/31/18 15:34	
Toluene-d8 (S)	%	97	75-125	08/31/18 15:34	

METHOD BLANK: 3039608 Matrix: Solid
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	08/31/18 15:34	
1,2-Dichloroethane	ug/L	ND	25.0	08/31/18 15:34	
1,4-Dichlorobenzene	ug/L	ND	25.0	08/31/18 15:34	
2-Butanone (MEK)	ug/L	ND	125	08/31/18 15:34	
Benzene	ug/L	ND	25.0	08/31/18 15:34	
Carbon tetrachloride	ug/L	ND	25.0	08/31/18 15:34	
Chlorobenzene	ug/L	ND	25.0	08/31/18 15:34	
Chloroform	ug/L	ND	25.0	08/31/18 15:34	
Tetrachloroethene	ug/L	ND	25.0	08/31/18 15:34	
Trichloroethene	ug/L	ND	10.0	08/31/18 15:34	
Vinyl chloride	ug/L	ND	5.0	08/31/18 15:34	
1,2-Dichloroethane-d4 (S)	%	101	75-125	08/31/18 15:34	
4-Bromofluorobenzene (S)	%	99	75-125	08/31/18 15:34	
Toluene-d8 (S)	%	97	75-125	08/31/18 15:34	

LABORATORY CONTROL SAMPLE: 3041889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	500	423	85	65-128	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

LABORATORY CONTROL SAMPLE: 3041889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	500	434	87	67-125	
1,4-Dichlorobenzene	ug/L	500	433	87	75-125	
2-Butanone (MEK)	ug/L	2500	2150	86	56-130	
Benzene	ug/L	500	451	90	71-125	
Carbon tetrachloride	ug/L	500	440	88	65-126	
Chlorobenzene	ug/L	500	431	86	75-125	
Chloroform	ug/L	500	416	83	72-125	
Tetrachloroethene	ug/L	500	445	89	69-127	
Trichloroethene	ug/L	500	452	90	75-128	
Vinyl chloride	ug/L	500	415	83	67-135	
1,2-Dichloroethane-d4 (S)	%			100	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3041890 3041891

Parameter	Units	10445513002		3041890		3041891		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
1,1-Dichloroethene	ug/L	ND	500	500	449	447	90	89	62-138	0	30			
1,2-Dichloroethane	ug/L	ND	500	500	447	451	89	90	68-125	1	30			
1,4-Dichlorobenzene	ug/L	ND	500	500	435	455	87	91	75-125	5	30			
2-Butanone (MEK)	ug/L	ND	2500	2500	2170	2260	87	91	57-135	4	30			
Benzene	ug/L	ND	500	500	468	469	93	93	72-125	0	30			
Carbon tetrachloride	ug/L	ND	500	500	440	459	88	92	66-137	4	30			
Chlorobenzene	ug/L	ND	500	500	450	449	90	90	75-125	0	30			
Chloroform	ug/L	ND	500	500	432	425	86	85	70-125	2	30			
Tetrachloroethene	ug/L	ND	500	500	471	467	94	93	74-126	1	30			
Trichloroethene	ug/L	ND	500	500	474	471	95	94	73-131	1	30			
Vinyl chloride	ug/L	ND	500	500	472	468	94	94	69-135	1	30			
1,2-Dichloroethane-d4 (S)	%						100	100	75-125					
4-Bromofluorobenzene (S)	%						99	100	75-125					
Toluene-d8 (S)	%						100	99	75-125					

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside
Pace Project No.: 10445164

QC Batch: 560062 Analysis Method: EPA 8270D
QC Batch Method: EPA 3510 Analysis Description: 8270D TCLP MSSV
Associated Lab Samples: 10445164001

METHOD BLANK: 3040172 Matrix: Water
Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	09/02/18 20:37	
2,4,5-Trichlorophenol	ug/L	ND	100	09/02/18 20:37	
2,4,6-Trichlorophenol	ug/L	ND	100	09/02/18 20:37	
2,4-Dinitrotoluene	ug/L	ND	100	09/02/18 20:37	
2-Methylphenol(o-Cresol)	ug/L	ND	100	09/02/18 20:37	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	09/02/18 20:37	
Hexachloro-1,3-butadiene	ug/L	ND	100	09/02/18 20:37	
Hexachlorobenzene	ug/L	ND	100	09/02/18 20:37	
Hexachloroethane	ug/L	ND	100	09/02/18 20:37	
Nitrobenzene	ug/L	ND	100	09/02/18 20:37	
Pentachlorophenol	ug/L	ND	200	09/02/18 20:37	
Pyridine	ug/L	ND	100	09/02/18 20:37	
2,4,6-Tribromophenol (S)	%	82	58-125	09/02/18 20:37	
2-Fluorobiphenyl (S)	%	71	45-125	09/02/18 20:37	
2-Fluorophenol (S)	%	60	30-125	09/02/18 20:37	
Nitrobenzene-d5 (S)	%	82	56-125	09/02/18 20:37	
p-Terphenyl-d14 (S)	%	84	50-125	09/02/18 20:37	
Phenol-d6 (S)	%	50	30-125	09/02/18 20:37	

LABORATORY CONTROL SAMPLE: 3040173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	320	64	34-125	
2,4,5-Trichlorophenol	ug/L	500	373	75	69-125	
2,4,6-Trichlorophenol	ug/L	500	392	78	72-125	
2,4-Dinitrotoluene	ug/L	500	437	87	52-125	
2-Methylphenol(o-Cresol)	ug/L	500	310	62	35-125	
3&4-Methylphenol(m&p Cresol)	ug/L	500	323	65	36-125	
Hexachloro-1,3-butadiene	ug/L	500	300	60	52-125	
Hexachlorobenzene	ug/L	500	396	79	75-125	
Hexachloroethane	ug/L	500	321	64	33-125	
Nitrobenzene	ug/L	500	353	71	59-125	
Pentachlorophenol	ug/L	500	338	68	33-125	
Pyridine	ug/L	500	260	52	30-125	
2,4,6-Tribromophenol (S)	%			80	58-125	
2-Fluorobiphenyl (S)	%			76	45-125	
2-Fluorophenol (S)	%			52	30-125	
Nitrobenzene-d5 (S)	%			71	56-125	
p-Terphenyl-d14 (S)	%			85	50-125	
Phenol-d6 (S)	%			46	30-125	

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Parameter	Units	3040174		3040175		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		10445164001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,4-Dichlorobenzene	ug/L	ND	500	500	319	340	64	68	70-130	6	30	M1	
2,4,5-Trichlorophenol	ug/L	ND	500	500	410	394	82	79	70-130	4	30		
2,4,6-Trichlorophenol	ug/L	ND	500	500	421	417	84	83	70-130	1	30		
2,4-Dinitrotoluene	ug/L	ND	500	500	409	402	82	80	70-130	2	30		
2-Methylphenol(o-Cresol)	ug/L	ND	500	500	389	404	78	81	70-130	4	30		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	500	385	391	77	78	70-130	1	30		
Hexachloro-1,3-butadiene	ug/L	ND	500	500	353	376	71	75	70-130	6	30		
Hexachlorobenzene	ug/L	ND	500	500	419	438	84	88	70-130	4	30		
Hexachloroethane	ug/L	ND	500	500	329	344	66	69	70-130	5	30	M1	
Nitrobenzene	ug/L	ND	500	500	395	406	79	81	70-130	3	30		
Pentachlorophenol	ug/L	ND	500	500	461	465	92	93	70-130	1	30		
Pyridine	ug/L	ND	500	500	168	215	34	43	70-130	25	30	M1	
2,4,6-Tribromophenol (S)	%						85	83	58-125				
2-Fluorobiphenyl (S)	%						77	77	45-125				
2-Fluorophenol (S)	%						56	59	30-125				
Nitrobenzene-d5 (S)	%						78	82	56-125				
p-Terphenyl-d14 (S)	%						87	87	50-125				
Phenol-d6 (S)	%						53	55	30-125				

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QUALITY CONTROL DATA

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

QC Batch: 559762 Analysis Method: NWTPH-Dx
 QC Batch Method: EPA Mod. 3510C Analysis Description: NWTPH-Dx GCS LV
 Associated Lab Samples: 10445164001

METHOD BLANK: 3038724 Matrix: Water

Associated Lab Samples: 10445164001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range	mg/L	ND	0.40	09/01/18 17:31	
Motor Oil Range	mg/L	ND	0.40	09/01/18 17:31	
n-Triacontane (S)	%.	66	50-150	09/01/18 17:31	
o-Terphenyl (S)	%.	73	50-150	09/01/18 17:31	

LABORATORY CONTROL SAMPLE & LCSD: 3038725

Parameter	Units	3038726					% Rec Limits	RPD	Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec				
Diesel Fuel Range	mg/L	2	1.9	1.7	97	85	50-150	14	20	
Motor Oil Range	mg/L	2	1.9	1.7	96	84	50-150	14	20	
n-Triacontane (S)	%.				90	78	50-150			
o-Terphenyl (S)	%.				91	78	50-150			

SAMPLE DUPLICATE: 3038727

Parameter	Units	10445164001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	100	100	0	30	
Motor Oil Range	mg/L	5.6	6.3	12	30	
n-Triacontane (S)	%.	0	0			S4
o-Terphenyl (S)	%.	0	0			S4

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

WORKORDER QUALIFIERS

WO: 10445164

[1] The Eurofins Lancaster samples were received outside of the required temperature range. Analysis was completed upon client approval.

ANALYTE QUALIFIERS

G+ Late peaks present outside the GRO window.

G- Early peaks present outside the GRO window.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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METHOD CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV TCLP	Water	SW-846 8260B	SW-846 1311/5030B

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11145922 P66 Sunnyside

Pace Project No.: 10445164

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10445164001	GW-11145922-082718-EM-WW	EPA Mod. 3510C	559762	NWTPH-Dx	560418
10445164001	GW-11145922-082718-EM-WW	NWTPH-Gx	560696		
10445164001	GW-11145922-082718-EM-WW	EPA 3010	559978	EPA 6010D	560186
10445164001	GW-11145922-082718-EM-WW	EPA 7470A	559980	EPA 7470A	560095
10445164001	GW-11145922-082718-EM-WW	EPA 3510	560062	EPA 8270D	560423
10445164001	GW-11145922-082718-EM-WW	EPA 8260B	560310		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

COC NO.: 56517

Address: _____
Phone: _____

WO#: 10445164

PM: JMG Due Date: 09/12/18

CLIENT: GHD_MA

Lab Locati

Laboratory Name: **PACE**

Lab Contact: **Jewiter Goss**

Project Name:

Project Location:

GHD Chemist: **WA**

Sampler: **Cloud**

Eric Maisie

SAMPLE IDENTIFICATION

(Containers for each sample may be combined on one line)

DATE (mm/dd/yyyy)

TIME (hh:mm)

PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)

1 **GW-1145922-082718-EM-WW 8/27 1400 W GN**

14

RUSH TAT

0-21

ANALYSIS REQUESTED (List of COC for Definitions)

TLP Metals 600/470

TLP VOCs 8200

TLP VOCs 8200

MTPH-DX

MTPH-DX

PH 9045

Lignite 1010

Cyanide 9010

Sulfide 9030

Matrix Code

Grab (G) or Comp (C)

Filtered (Y/N)

Total Containers/sample

MS/MSD Request

Carrier:

Airbill No:

Total # of Containers: **14**

COMMENTS/
SPECIAL INSTRUCTIONS:

TAT Required in business days (use separate COCs for different TATs):

1 Day 2 Days 3 Days 1 Week 2 Week Other: **5 day**

Notes/ Special Requirements:

RELINQUISHED BY	COMPANY	DATE	RECEIVED BY	COMPANY	DATE	TIME
Eric Maisie	GHD	8/27/18 1545	Jewiter Goss	PACE	8/28/18	9:55

Sample Condition Upon Receipt

Client Name: GHD Project #: _____

WO#: 10445164

10445164

Courier: Fed Ex UPS USPS Client
 Commercial Pace SpeeDee Other: _____
 Tracking Number: 25025 2044 4253

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer Used: G87A9170600254 G87A9155100842 Type of Ice: Wet Blue None Dry Melted

Cooler Temp Read (°C): 2.8 Cooler Temp Corrected (°C): 2.8 Biological Tissue Frozen? Yes No N/A
 Temp should be above freezing to 6°C Correction Factor: Trust Date and Initials of Person Examining Contents: LO 8/28/18

USDA Regulated Soil N/A, water sample)
 Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Containers intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? Matrix: <u>WAT</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
All containers needing acid/base preservation have been checked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Sample # <u>11 1/1</u>
Headspace in VOA Vials (>6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: <u>LO</u> Lot # of added preservative: <u>1113120</u>
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>SEE EXCEPTIONS</u>
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Pace Trip Blank Lot # (if purchased): _____	

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____ Date/Time: _____ Field Data Required? Yes No
 Comments/Resolution: _____

Project Manager Review: JENNI GROSS Date: 08/28/18
 Note: Whenever there is a discrepancy affecting North Carolina, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).


SCUR Exceptions:

Workorder #:

Issue	Sample ID	Container Type/#

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH Upon Receipt	Date Preservation Adjusted	Time Preservation Adjusted	Amount of Additional Preservative Added	Lot # of Preservative Added	pH After Adjustment	Initials
GW-1145922-08 2715-44-WW	HNO ₃	>6	8/28/18	1450	1ml	117120	2.0	EPJ

	Document Name: Headspace Exception	Document Revised: 06Nov2017 Page 1 of 1
	Document No.: F-MN-C-276-Rev.00	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace > 6mm	Headspace < 6mm	No Headspace	Total Vials
GW-11145922-062718- EM-WW	0	1	2	3



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

PACE Analytical Services, Inc.
Suite 200
1800 Elm Street SE
Minneapolis MN 55414

Report Date: September 05, 2018 12:38

Project: 11145922 P66 Sunnyside

Account #: 03787
Group Number: 1981947
PO Number: 10445164
State of Sample Origin: WA

Electronic Copy To PACE Analytical Services, Inc.

Attn: Jennifer Gross

Respectfully Submitted,



Bonnie Stadelmann
Senior Project Manager

(312) 590-3133

To view our laboratory's current scopes of accreditation please go to <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

Client Sample Description

Sample Collection
Date/Time

ELLE#

GW-11145922-082718-EM-WW Water Sample

08/27/2018 14:00

9779483

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: GW-11145922-082718-EM-WW Water Sample
10445164001
11145922 P66 Sunnyside

PACE Analytical Services, Inc.
ELLE Sample #: WW 9779483
ELLE Group #: 1981947
Matrix: Wastewater

Project Name: 11145922 P66 Sunnyside

Submission Date/Time: 08/30/2018 10:15
Collection Date/Time: 08/27/2018 14:00

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Wet Chemistry					
01123	Cyanide (Reactivity)	SW-846 9012B modified n.a.	mg/kg N.D.	mg/kg 58.2	1
12151	Temperature of pH	EPA 170.1 n.a.	Degrees C 20.4	Degrees C 0.010	1
12152	pH	SM 4500-H+ B-2011 n.a.	Std. Units 7.7	Std. Units 0.010	1
00430	Flash Point	SW-846 1010A n.a.	Degrees F No Flash Observed	Degrees F 50	1
No flash observed below 187F. Test flame extinguished at 167F. Flash point was determined using Pensky Martens closed cup apparatus.					
01122	Sulfide (Reactivity)	SW-846 9034 n.a.	mg/kg N.D.	mg/kg 160	1
01121	Reactivity	SW-846 Chapter 7.3 n.a.	see below See Below	see below 0	1
Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

The temperature of the temperature blank bottle(s) upon receipt at the lab was 9.6C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 8.3-9.7C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01123	Cyanide (Reactivity)	SW-846 9012B modified	1	18247104201A	09/04/2018 18:33	Gregory Baldree	1
12151	Temperature of pH	EPA 170.1	1	18243121521A	08/31/2018 14:30	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	18243121521A	08/31/2018 14:30	Jeremy L Bolf	1
00430	Flash Point	SW-846 1010A	1	18247043001A	09/04/2018 06:26	Susan A Engle	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18247112101A	09/04/2018 05:15	Kevin Litwa	1

Sample Description: GW-11145922-082718-EM-WW Water Sample
10445164001
11145922 P66 Sunnyside

PACE Analytical Services, Inc.
ELLE Sample #: WW 9779483
ELLE Group #: 1981947
Matrix: Wastewater

Project Name: 11145922 P66 Sunnyside

Submittal Date/Time: 08/30/2018 10:15
Collection Date/Time: 08/27/2018 14:00

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01121	Reactivity	SW-846 Chapter 7.3	1	18247112101A	09/04/2018 05:15	Kevin Litwa	1

Quality Control Summary

Client Name: PACE Analytical Services, Inc.
Reported: 09/05/2018 12:38

Group Number: 1981947

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/kg	LOQ mg/kg
Batch number: 18247104201A Cyanide (Reactivity)	Sample number(s): 9779483 N.D.	60.0
Batch number: 18247112101A Sulfide (Reactivity)	Sample number(s): 9779483 N.D.	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18247104201A Cyanide (Reactivity)	Sample number(s): 9779483 1000	1010.3			101		77-113		
	Degrees F	Degrees F	Degrees F	Degrees F					
Batch number: 18247043001A Flash Point	Sample number(s): 9779483 81	81.88	81	79.88	101	99	97-103	2	4
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18247112101A Sulfide (Reactivity)	Sample number(s): 9779483 570	386			68		63-100		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 18243121521A pH	Sample number(s): 9779483 7.00	6.94			99		95-105		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: PACE Analytical Services, Inc.
Reported: 09/05/2018 12:38

Group Number: 1981947

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc Degrees C	DUP Conc Degrees C	DUP RPD	DUP RPD Max
Batch number: 18243121521A Temperature of pH	Sample number(s): 9779483 BKG: 9779483 20.4	20.4	0	5
	Std. Units	Std. Units		
Batch number: 18243121521A pH	Sample number(s): 9779483 BKG: 9779483 7.71	7.67	1	4

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chain of Custody

3787/1981947/9779483



Workorder: 10445164

Workorder Name: 11145922 P66 Sunnyside

Results Requested By: 9/5/2018

Report / Invoice To		Subcontract To			Requested Analysis																
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426 Email: jennifer.gross@pacelabs.com		Bonnie 2425 New Holland Pike Lancaster, PA 17601 717-656-2300			P.O. 10445164																
State of Sample Origin: WA		Preserved Containers																			
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	General	GN														LAB USE ONLY	
1	GW-11145922-082718-EM-VVV	8/27/2018 14:00	10445164001	Water		3															
2																					
3																					
4																					
5																					
Transfers															Comments						
Released By	Date/Time	Received By	Date/Time																		
<i>4/6/18 Pace</i>	<i>8/28/18 16:15</i>	<i>Karen</i>	<i>8/31/18 10:15</i>	RUSH																	
				SHIP ON ICE: GN1/3; GN2/3; GN3/3																	
Cooler Temperature on Receipt <i>8.2-9.5 C</i>		Custody Seal <i>Y</i> or N			Received on Ice <i>Y</i> or N			Samples Intact <i>Y</i> or N													

Karen



Client: Pace

10445164

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 08/30/2018 10:15
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: WA

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Katie Hartlove (2114) at 12:13 on 08/30/2018

Samples Chilled Details: 10445164

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT131	9.6	DT	Wet	N	Loose	Y	N

Elevated Temperature Details: 10445164

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	32170023	8.3	9.4			9.7		

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Appendix G

Survey Data

MONITORING WELL SURVEY

P66 SUNNYSIDE

SITUATED IN THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 10 NORTH, RANGE 22 EAST OF THE WILLAMETTE MERIDIAN, CITY OF SUNNYSIDE, COUNTY OF YAKIMA, STATE OF WASHINGTON.



SCALE: 1"=20'



LEGEND

- = MONITORING WELL AS NOTED
- = SOIL BORING AS NOTED
- = SITE BENCHMARK AS NOTED
- = BUILDING LINE
- = CHAIN LINK FENCE
- = CONCRETE

HORIZONTAL DATUM

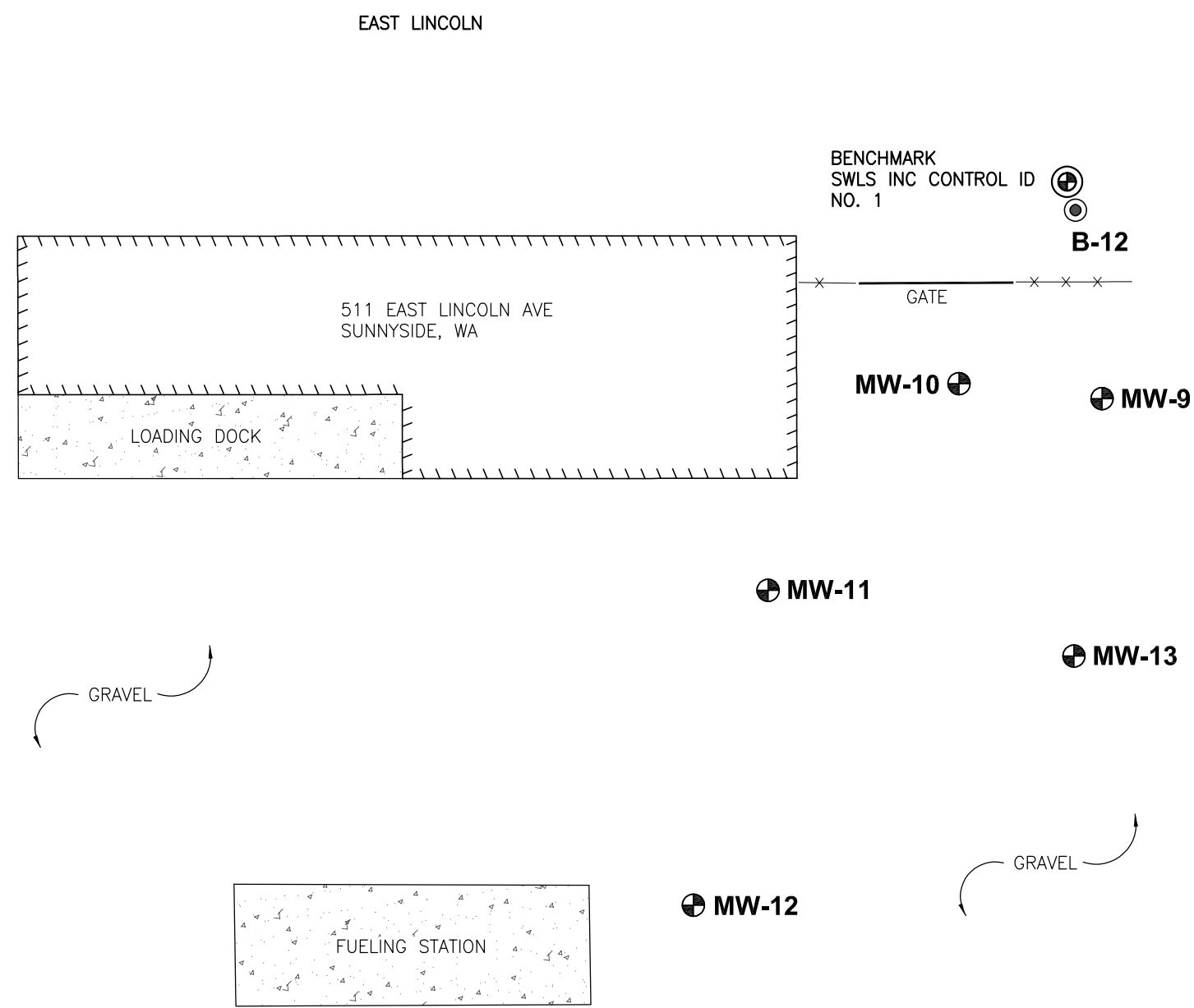
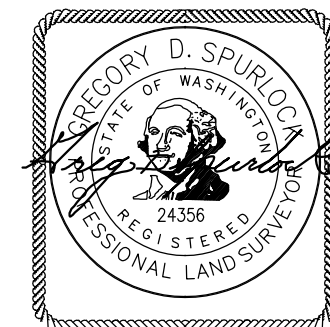
NAD 83/2011 EPOCH 2010.0000
WASHINGTON STATE PLANE COORDINATE SYSTEM
SOUTH ZONE 4602, U.S. SURVEY FEET.

VERTICAL DATUM

NAVD 88 (GEOID2012B)

SITE BENCHMARKS

SWLS INC SITE CONTROL POINT ID 1 LOCATION AS SHOWN. ELEVATION OF MARK IS 736.05 FEET.



STATEWIDE LAND SURVEYING INC.

CLIENT: GHD	DRAWN: G.W.E.	DRAWN DATE: 05/14/19
JOB NUMBER: 2019-094	REVIEWED: G.D.S.	REVIEW DATE: 05/15/19
SCALE: 1"=20'	SHEET: 1/1	SURVEY DATE: 05/05/19



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about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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