



Final Phase II Environmental Site Assessment

601 Dexter Property

601 Dexter Avenue North
Seattle, Washington

Prepared for

Alexandria Real Estate Equities, Inc.

May 23, 2019

19449-00



Final Phase II Environmental Site Assessment

601 Dexter Property

601 Dexter Avenue North
Seattle, Washington

Prepared for

Alexandria Real Estate Equities, Inc.

May 23, 2019

19449-00

Prepared by

Hart Crowser, Inc.

Marissa Goodman, EIT

Project, Environmental Engineer

Marissa.Goodman@hartcrowser.com

Julie K. W. Wukelic

Senior Principal, Engineer

Julie.Wukelic@hartcrowser.com

Contents

EXECUTIVE SUMMARY	1
INTRODUCTION	2
FIELD INVESTIGATION	3
SITE BACKGROUND	4
Site Description	4
Geology and Hydrogeology	4
SUBSURFACE ASSESSMENT	5
Field Investigation Activities and Observations	5
Soil Sample Chemical Analysis and Results	6
Groundwater Sample Chemical Analysis and Results	7
Sub-Slab Soil Vapor Sample Chemical Analysis and Results	8
Indoor Air Sample Chemical Analysis and Results	9
CONCLUSIONS AND RECOMMENDATIONS	9
LIMITATIONS	10
TABLES	
1 Analytical Results for Soil Samples	
2 Analytical Results for Groundwater Samples	
3 Analytical Results for Sub-Slab Soil Vapor Samples	
4 Analytical Results for Crawl Space Indoor Air Samples	
5 Historical Analytical Results for Soil Samples at 615 Dexter Property	
6 Historical Analytical Results for Groundwater Samples at 615 Dexter Property	
FIGURES	
1 Vicinity Map	
2 Site Plan	
APPENDIX A	
Field Exploration Methods and Boring Logs	
APPENDIX B	
Chemical Data Quality Review and Laboratory Reports	

601 Dexter Property

601 Dexter Avenue North
Seattle, Washington

EXECUTIVE SUMMARY

Hart Crowser conducted a Phase II Environmental Site Assessment (Phase II) at the 601 Dexter Property (Property) at 601 Dexter Avenue North in Seattle, Washington (Figure 1) to evaluate potential environmental impacts from on-site and off-site historical uses, as well as to better understand the geological conditions of the Property for the planned development.

The previous Phase I Environmental Site Assessment (Phase I) reports by others, and a recent one conducted by Hart Crowser (May 2019), identified recognized environmental conditions (RECs) for the Property, including the past use of the Property as a gasoline service station, laundry/cleaners, and other light industrial uses since 1919. City street directories indicated that Sanitary Laundry operated on the Property in 1930 and 1935. The Colotyle Corporation (building materials business) was an occupant of the Property in the 1940s to 1950s. The gas station located on the east side of the Property near Dexter Avenue North was present in the 1940s until the late 1950s. A 1949 Sanborn Fire Insurance Map indicated four solvent tanks (500 gallons each) located in the alley to the north of the western half of the Property. A service station was also identified directly north of the eastern third of the Property and alley as well as south across Mercer Street.

Our Phase II included advancing six hollow-stem auger (HSA) explorations on the Property on April 3 and 4, 2019, to depths of 16.5 to 50 feet. Continuous soil samples at exploration locations were used for soil classification and field screening using visual, sheen, and headspace vapor methods. Soil samples were screened, and 25 selected soil samples were submitted for chemical analysis.

The soil analytical results and field observations from our Phase II found environmental impacts associated with gasoline-related constituents (petroleum and volatile organic compounds [VOCs]) in soil in the southeast corner exploration (HC-4) of the Property and in soil and groundwater in the exploration (HC-1) adjacent to the Property in the right-of-way/alley. The groundwater sample from the monitoring well HC-4 had no detections of any constituents of concern above the laboratory detection limit. The detections of gasoline-petroleum-related constituents in the soil at HC-4 were low and below Model Toxics Control Act (MTCA) cleanup levels. The detections of these constituents were also in the soil sample at a depth of 35 feet and not detected in the two other samples at depths of 10 and 15 feet. The groundwater depth noted in the HC-4 boring during drilling was at a depth of 35 feet.

There were detectable concentrations of gasoline-related constituents (petroleum and VOCs) in two of the nine soil samples from HC-1 at depths of 25 and 30 feet. No benzene was detected in any of the soil samples indicated aged gasoline. There was an exceedance above MTCA cleanup levels in the soil sample from HC-1 at the 25 foot depth. The concentration detected was 290 milligrams per kilogram (mg/kg),

which is over the 100 mg/kg MTCA Method A cleanup level for petroleum in the gasoline range with no benzene present. The soil sample at 30 feet from HC-1 had a detectable concentration of gasoline 90 mg/kg, which is below the MTCA Method A cleanup level. The grab groundwater sample from HC-1 also had a detection of gasoline of 6.9 micrograms per liter (ug/L) in the petroleum-range above the MTCA Method A cleanup level of 1.0 ug/L.

There were no detections above the laboratory detection limits in the soil samples analyzed for other VOCs related to chlorinated solvents; other petroleum constituents; polyaromatic hydrocarbons (PAHs); or polychlorinated biphenyl (PCBs). The metal results in the soil samples were either low concentrations or below the laboratory detection limits.

Based on the soil and groundwater sampling results, it appears that there have been petroleum-related impacts in the soil and groundwater beneath the Property in the eastern end. The likely source(s) were the previous gasoline service stations that operated on the Property and adjacent site to the north. The soil sampling was limited to the eastern third of the Property that was not covered by a structure. Although there were no soil or groundwater samples collected directly beneath the existing structure, the soil and groundwater samples collected on the Property did not indicate a widespread environmental concern of chlorinated solvents associated with a laundry/cleaning operations or other VOC constituents associated with industrial operations that could have used chemicals and petroleum products.

Several VOCs, including benzene, toluene, ethylbenzene, and xylene (BTEX), chlorinated solvents, and non-typical VOCs acrolein and carbon tetrachloride were detected in the sub-slab soil vapor and/or indoor air samples. Acrolein and naphthalene were detected at concentrations exceeding MTCA Method B screening levels in both sub-slab soil vapor samples. 1,3-butadiene, acrolein, carbon tetrachloride, naphthalene, and total petroleum hydrocarbons (TPH) were detected at concentrations exceeding MTCA Method B cleanup levels in one or more indoor air samples. This indicates the possibility of isolated areas of soil and/or groundwater impacts below the existing building from historical operations and uses on the Property.

INTRODUCTION

This report presents the Phase II activities and results from soil, groundwater, soil vapor, and air sampling and analysis on the Property. Our report is organized as follows:

- Executive Summary;
- Introduction;
- Field Investigation;
- Site Background;
- Subsurface Assessment;
- Conclusions and Recommendations; and
- Limitations.

Soil, groundwater, sub-slab soil vapor, and crawl space analytical results are summarized in Tables 1 through 6, respectively. Figure 1 is a Vicinity Map showing the location of the Property. A site plan showing

boring locations is presented on Figure 2. Field exploration methods and soil boring logs are provided in Appendix A and the chemical data quality review and laboratory reports are presented in Appendix B.

FIELD INVESTIGATION

The scope of work was based on our review of available data on the Property and surrounding area, Phase I findings from previous and current Phase I, and anticipated potential future development options requiring subsurface soil excavations.

The following scope of work was completed for this Phase II:

- Advanced six auger borings on and near the Property to depths ranging from 16.5 to 50 feet.
- Collected continuous soil samples at the boring locations for soil classification and field screening using visual, sheen, and headspace vapor methods.
- Collected and chemically analyzed select soil samples for one or more of the following, with analytes selected based upon location and field observations:
 - Diesel- and Lube Oil-Range Total Petroleum Hydrocarbon (TPH-D and TPH-O, respectively);
 - Gasoline-Range Petroleum Hydrocarbons (TPH-G);
 - VOCs, including BTEX;
 - Polycyclic Aromatic Hydrocarbons (PAHs);
 - PCBs;
 - Total Metals (arsenic, cadmium, chromium, lead, and mercury); and
 - Total solids.
- Collected a grab groundwater sample from boring HC-1.
- Installed and developed a monitoring well in boring HC-4.
- Collected a groundwater sample from new monitoring well HC-4.
- Chemically analyzed groundwater samples for one or more of the following:
 - TPH-D and TPH-O;
 - TPH-G;
 - VOCs, including BTEX;
 - PAHs;
 - Total and Dissolved Metals (arsenic, cadmium, chromium, lead, and mercury); and
 - Total suspended solids (TSS).
- Prepared draft and final reports presenting the findings of our work.

SITE BACKGROUND

Site Description

The Property is located at 601 Dexter Avenue North, in Seattle, and is bounded by an alleyway and 615 Dexter Avenue North property to the north, Dexter Avenue North to the east, Mercer Street to the south, and Aurora Avenue North to the west. The Property consists of a single King County tax parcel (2249000100), approximately 23,632-square-feet (0.54 acres).

The Property contains one structure, though the original structure (west side) was constructed in 1919 and expanded to the east in 1941 and 1943. An asphalt paved parking lot and loading dock are located on the northeast corner of the Property.

The abbreviated legal description from the King County assessor website is:

EDEN ADD LESS ALLEY LESS ST

PLat Block: 3

Plat Lot: 1, 2, 7, and 8

The Property is bounded by:

- An office and warehouse building/property owned by the City of Seattle and currently leased by Copiers Northwest to the north, across an alleyway between the two buildings;
- Vacant lot owned by the City of Seattle to the east across Dexter Avenue North, recently used as a staging area for construction equipment and materials by a general contractor;
- Aurora Avenue North (State Route 99) to the west.

The surrounding sites are generally used for commercial purposes.

Geology and Hydrogeology

Our drilling program consisted of drilling six borings at the Property to explore the subsurface conditions. The approximate locations of the borings are shown on Figure 2, and the boring logs are included in Appendix A.

The Property is within the central portion of the Puget Sound lowland physiographic province of Washington State. The Puget Lowland is a north–south trending depression bounded on the east and west by the Cascade Range and Olympic Mountains, respectively. This area has been glaciated repeatedly during the past 2 million years. The last glacial advance and retreat known as the Vashon Stade of the Fraser Glaciation ended approximately 10,000 to 13,000 years ago. Topography of the lowland is characterized by generally north–south trending ridges and valleys that are the result of glacial scouring. These ridges and valleys have been modified by postglacial erosion and deposition. The region is typically underlain by glacial till, which ranges from a gray, gravelly, sandy silt to a silty sand, and is typically very dense.

Our understanding of the Property's geology and hydrogeology is based on the recent drilling program and investigations conducted by Hart Crowser and others nearby. The Property is approximately at an elevation of 50 feet above sea level and is mostly topographically flat, though slightly sloped towards the east on the eastern portion of the parcel.

Current and previous explorations conducted on the Property indicate that subsurface geologic units are homologous across the Property. The Property is underlain by a layer of artificial fill over competent glacial till and advance sand deposits. Coarse to medium-grained sandy fill reach 12 feet below ground surface (bgs) and silty sand with gravel further below to 20 feet bgs.

The explorations on the Property found groundwater at 35 feet bgs at the southeast corner of the parcel and 25 feet bgs in the alleyway. Based on groundwater level borings taken around the Property, the Property may be characteristic of perched groundwater, as other explorations at equivalent depths did not observe groundwater.

SUBSURFACE ASSESSMENT

Field Investigation Activities and Observations

Utility locates were conducted around the Property at the proposed boring locations. On April 3 and 4, 2019, Hart Crowser advanced five hollow-stem auger (HSA) borings (HC-2 through HC-5 and MW-1) in the asphalt-paved parking lot at the Property and one HSA boring (HC-1) in the right-of-way/alley north of the eastern portion of the Property. The borings were advanced between 16.5 feet bgs to 50 feet bgs (Figure 2).

Boring HC-4 was advanced to a depth of 50 feet and completed as a monitoring well (MW). Boring MW-1 was originally intended to be converted to a monitoring well, except no groundwater was encountered during drilling of the boring. During drilling of HC-4, we continued until water was encountered and the well was screened between 40 and 50 feet bgs. The well was developed, and a groundwater sample collected on April 12, 2019.

Soil samples were collected from the split-spoon sampler in 2.5-foot sample intervals in the upper 15 feet and collected every 5 feet until 35 feet or groundwater was encountered. Forty-two soil samples were field screened using headspace vapor (PID) tests, sheen tests, and visual observations. PID field screening results were primarily <0.1 parts per million (ppm), except for elevated PID detections in the nine soil samples collected and screened from boring HC-1. Petroleum odors were observed at HC-1 between 25 and 30 feet bgs. The field screening results are presented on the exploration logs in Appendix A.

Sub-slab soil vapor sampling was conducted on April 9 and 10, 2019. Indoor air sampling was conducted on April 10, 2019. Two sub-slab soil vapor samples (SV-1 and SV-2) and two indoor air samples from the crawl space below the building (CSE-1 and CSW-1) were collected and analyzed.

Soil vapor samples were collected using an electric rotary hammer drill to drill a 1-1/4-inch hole approximately 4 to 5 inches down through the existing concrete slab. A temporary probe casing, vapor

collection screen, and sampling tubing was then advanced into the hole and sealed with a rubber stopper and bentonite clay. A shroud was placed over the sampling assembly. Before sampling began, the tracer gas (helium) was released into the shroud. The sub-slab soil vapor samples were analyzed for helium, which was not detected at or above laboratory reporting limits in either sample. This indicates that we had a tight seal and did not collect ambient air into the sample. A 6-liter sub-slab soil vapor sample was collected over the course of approximately 10 to 30 minutes using a Summa canister. After sample collection was completed, the temporary probe casing and sampling assembly were removed, and the hole was filled with Portland cement until flush with the existing surface. Field staff did not detect any odors or obvious environmental concerns during sampling. The sub-slab soil vapor samples were submitted to a qualified laboratory (Fremont Analytical, Inc.) and analyzed using Environmental Protection Agency (EPA) Method TO-15 for VOCs and air-phase hydrocarbon (APH) petroleum fractions, helium, and EPA Method 3C for oxygen, carbon dioxide, and methane.

Indoor air samples were collected over 8 hours (from approximately 10:00 a.m. to 6:00 p.m.) using evacuated stainless-steel Summa canisters equipped with 8-hour flow controllers. While sampling was in progress, canister vacuum readings were monitored four times—just after sample collection began, 1 hour after sample collection, 7 hours after sample collection, and just before sample collection ended—to verify that collection was progressing at the correct rate. Weather conditions were monitored during the sampling period, as changing weather conditions can affect vapor intrusion potential. The weather during the sampling period was generally cool, with temperatures (in degrees Fahrenheit) in the high 40s to low 50s, and cloudy with rain off-and-on. Weather observations were recorded three times throughout the day. The indoor air samples were submitted to a qualified laboratory (Fremont Analytical, Inc.) and analyzed using EPA Method TO-15 SIM for VOCs and APH petroleum fractions.

Soil Sample Chemical Analysis and Results

Twenty-five soil samples were selected for chemical analysis, based on either field screening results or representative sample depths in the eastern third of the Property. Samples collected from the east parking lot were primarily selected for analysis to evaluate if petroleum products were present on the Property from the past use of that area of the Property as a gasoline station or migration onto the Property from the former gasoline station to the north. Soil samples selected for VOCs were to evaluate for possible migration of VOCs from past releases beneath the building from historical uses as a laundry/cleaners and other light industrial uses. Historical documents indicated that trenches and pits were filled in the warehouses in the 1950s therefore indicating a risk of potential past releases of petroleum or other chemicals that may have been used in historical operations.

The soil sample locations were limited to the accessible east parking lot, which would be considered downgradient from most of the building on the Property.

The soil sample analytical results are summarized in Table 1.

For screening purposes, most of the sample results were compared to MTCA Method A soil cleanup levels for unrestricted land use. Based on the soil sample analytical results and comparison to MTCA Method A cleanup levels, the following was observed:

- Sixteen soil samples were analyzed for TPH-D and TPH-O. None of the samples analyzed had detectable concentrations above the laboratory detection limits.
- Fifteen soil samples were analyzed for TPH-G. Only three soil samples (HC-1-25; HC-1-30; and HC-4-35) had detectable concentrations of TPH-G in the gasoline range. One of the samples (HC-1-25) had a concentration of 290 mg/kg, which was above the MTCA Method A cleanup level of 100 mg/kg for TPH-G when benzene is not present. The other two concentrations were well below the MTCA Method A cleanup level of 100 mg/kg.
- Six soil samples were analyzed for VOCs or BTEX. BTEX concentrations were not detected above the laboratory reporting limits for any of the samples analyzed. Low levels of VOCs were found in HCPP3-10-11 and HCPP11-13-14. The concentrations of the analytes found (acetone, 2-butanone, and carbon disulfide), were below applicable regulatory criteria.
- Sixteen soil samples were analyzed for VOCs. Only three samples (HC-1-25; HC-1-30; and HC-4) contained low concentrations of ethylbenzene, xylenes, and other petroleum-related VOC concentrations below the MTCA Method A or B cleanup levels.
- Four soil samples were analyzed for PAHs and all detectable concentrations were below the laboratory detection limit.
- One soil sample was analyzed for PCBs and the concentrations were below the laboratory reporting limits.

Groundwater Sample Chemical Analysis and Results

Two groundwater samples were collected and analyzed. One water sample was a grab sample collected from boring HC-1 and the other water sample was collected from the permanent well, HC-4. The groundwater sample analytical results are summarized in Table 2.

For screening purposes, the sample results were compared to MTCA Method A groundwater cleanup levels. Based on the groundwater sample analytical results and comparison to MTCA Method A cleanup levels, the following was observed:

- No concentrations of petroleum in the diesel- or gasoline-range, PAHs, VOCs, total chromium, total cadmium, total arsenic, or total mercury were detected above the laboratory limits for any of these analytes in the groundwater sample collected from HC-4. A low total lead concentration (.002 mg/L) was detected in the groundwater sample from HC-4 and was below the MTCA Method A cleanup level of .015 mg/L.
- A petroleum concentration in the gasoline-range was detected at 6.0 mg/L in the grab groundwater sample from HC-1 that is above the MTCA Method A cleanup level of 1.0 mg/L for petroleum gasoline when benzene is not present.

- Low concentrations of ethylbenzene, xylenes, and other petroleum-related VOCs below the MTCA Method A or B cleanup levels were detected in the grab groundwater sample from HC-1.
- No concentrations of petroleum in the diesel-range, total and dissolved chromium, total and dissolved cadmium, total and dissolved arsenic, or total and dissolved mercury were detected above the laboratory limits for any of these analytes in the grab groundwater sample collected from HC-1. A low total lead concentration (.006 mg/L) was detected in the groundwater sample from HC-2 and was below the MTCA Method A cleanup level of .015 mg/L.
- The low detections of lead in the two groundwater samples may be due to high suspended solids as the dissolved lead concentration in groundwater sample from HC-1 was below the laboratory detection limit.

Sub-Slab Soil Vapor Sample Chemical Analysis and Results

The sub-slab soil vapor sample analytical results are summarized in Table 3, and the laboratory report is in Appendix B.

We compared the results with MTCA Method B sub-slab soil gas screening levels. Laboratory analysis and results were:

- APH petroleum fractions (C5-C8 aliphatics) were detected in both samples at concentrations ranging between 144 and 1,030 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), below the MTCA Method B screening level of 90,000 $\mu\text{g}/\text{m}^3$. APH petroleum fractions (C9-C12 aliphatics and C9-C10 aromatics) were detected in SV-1 at concentrations of 1,050 and 191 $\mu\text{g}/\text{m}^3$, respectively, below the applicable MTCA Method B screening levels.
- Several VOCs were detected in one or both samples, including BTEX and the chlorinated solvents tetrachloroethene and trichloroethene. For most of these constituents, there is no published screening level, or the detected concentration was below the MTCA Method B screening level. Both samples had concentrations of naphthalene ranging from 2.77 to 3.31 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B screening level of 2.45 $\mu\text{g}/\text{m}^3$. Both samples had concentrations of acrolein ranging from 0.855 to 1.02 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B screening level of 0.305 $\mu\text{g}/\text{m}^3$.
- The concentrations of total petroleum hydrocarbons (calculated as the summation of BTEX, naphthalene, and APH petroleum fraction concentrations) ranged between 1,054 and 1,405 $\mu\text{g}/\text{m}^3$, below the MTCA Method B screening level of 4,700 $\mu\text{g}/\text{m}^3$.
- Both samples were analyzed for helium, which was not detected at or above laboratory reporting limits in either sample.
- Both samples were analyzed for three major gases: oxygen, methane, and carbon dioxide. Oxygen was detected in both samples at a concentration of approximately 24 percent. Methane was not detected at or above the laboratory reporting limits in either sample. Carbon dioxide was detected in one sample (SV-1) at a concentration of 0.124 percent.

Indoor Air Sample Chemical Analysis and Results

The indoor air sample analytical results for the crawl space samples are summarized in Table 4, and the laboratory report is in Appendix B.

We compared the results with MTCA Method B indoor air cleanup levels. Laboratory analysis and results were:

- APH petroleum fractions (C5-C8 aliphatics) were detected in both samples at concentrations ranging between 132 and 183 $\mu\text{g}/\text{m}^3$, below the MTCA Method B cleanup level of 2,700 $\mu\text{g}/\text{m}^3$. APH petroleum fractions (C9-C12 aliphatics and C9-C10 aromatics) were not detected at or above laboratory reporting limits in either sample.
- Several VOCs were detected in one or both samples, including toluene. Chlorinated solvents were not detected at or above laboratory reporting limits in either sample. For most of the detected constituents, there is no published cleanup level, or the detected concentration was below the MTCA Method B cleanup level. Both samples had concentrations of naphthalene of 1.56 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B cleanup level of 0.735 $\mu\text{g}/\text{m}^3$. Both samples had concentrations of acrolein ranging from 1.27 to 1.56 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B cleanup level of 0.00914 $\mu\text{g}/\text{m}^3$. Both samples had concentrations of carbon tetrachloride of approximately 0.47 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B cleanup level of 0.417 $\mu\text{g}/\text{m}^3$. 1,3-butadiene was detected in one sample (CSW-1) at a concentration of 0.91 $\mu\text{g}/\text{m}^3$, exceeding the MTCA Method B cleanup level of 0.0833 $\mu\text{g}/\text{m}^3$.
- The concentrations of total petroleum hydrocarbons (calculated as the summation of BTEX, naphthalene, and APH petroleum fraction concentrations) ranged between 134.7 and 185.7 $\mu\text{g}/\text{m}^3$. The concentration of total petroleum hydrocarbons in sample CSW-1 exceeded the MTCA Method B cleanup level of 140 $\mu\text{g}/\text{m}^3$.

CONCLUSIONS AND RECOMMENDATIONS

The soil and groundwater analytical results and field observations from our Phase II indicated petroleum soil impacts likely associated with the former gasoline station on the Property and adjacent site to the north next to Dexter Avenue North that will require special handling and premium disposal at an approved receiving facility during Property redevelopment, involving soil removal.

There were petroleum-related constituents also detected in two groundwater samples, indicating that the shallow groundwater zone has also likely been impacted and will require groundwater management during construction if excavations are planned at 25 feet below grade or more. Although no benzene concentrations were detected in either soil or groundwater samples analyzed, other VOCs were detected, thus there is a potential for vapor intrusion that may warrant a vapor barrier as part of the future development.

No chlorinated solvents were detected in any of the soil or groundwater samples collected and analyzed; however, chlorinated solvent constituents and other VOCs were detected in soil vapor and air samples collected beneath the building. Although the chlorinated solvent concentrations were low in the soil vapor

samples analyzed, their presence indicates possible soil and/or groundwater impacts, though likely in isolated pockets. The historical research indicated that former drains and pits beneath the warehouse (2/3 of the building) were filled in the 1950s during building renovations and these are possible sources for the detections in the soil vapor and air samples. The other possible source for the detected VOCs in the soil vapor and air samples are the former solvent and fuel oil tanks reported in the alleyway to the north.

The soil and groundwater sample results collected and analyzed on the adjacent upgradient 615 Dexter Site and alley in 2017 by Shannon and Wilson and 2019 by Hart Crowser indicated similar isolated areas of petroleum-related impacts in the soil and groundwater by the former gasoline station on the east end of the site and alley where known USTs were located. No chlorinated solvents were detected in any of the soil and groundwater samples analyzed. Tables 5 and 6 summarize the results of the historical soil and groundwater data on this site.

The criteria for accepting clean soil required by clean disposal facilities or sites have become very strict. Based on data from the soil samples analyzed and historical uses of the Property, even though most soil samples analyzed had detections of contaminants of concern (COCs) below applicable cleanup levels or the laboratory reporting limits, a large quantity of the soil in the fill will likely require special handling and a premium disposal fee at a licensed disposal facility. Based on boring logs on the Property and surrounding sites, the thickness of the fill is typically less than 10 feet from the surface.

Prior to redevelopment of the Property, and after the building has been demolished, we recommend that a cleanup action plan/construction contingency plan/soil management plan (CAP/CCP/SMP) be developed to address the known petroleum-impacted soil, the suspect petroleum- and VOC-impacted (including marginally impacted soil containing low levels of VOCs, petroleum, PAHs, and potential unknown environmental impacts or abandoned underground storage tanks (USTs) that may be encountered during subsurface excavation. Prior to commencing cleanup activities, supplemental sampling and analysis could be conducted beneath the building footprint once the existing building has been removed for soil disposal characterization. The CAP/CCP/SMP would include protocols for removal of the known impacted soil, marginally impacted soil, clean soil, and address off-Property disposal of soils and any discovered USTs or previously unknown impacted soil.

Since several VOCs, including BTEX, chlorinated solvents, and non-typical VOCs of acrolein and carbon tetrachloride were detected in the sub-slab soil vapor and/or indoor air samples, there could be isolated impacted soil sources of these constituents beneath the building or from off-property sources (e.g. alley or 615 Dexter site), as they were generally not detected in the soil samples collected in the six borings advanced in this Phase II.

LIMITATIONS

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Alexandria Real Estate Equities, Inc. for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

The MTCA cleanup levels included in this report are provided for comparison purposes only and are based on our understanding of cleanup levels required by Ecology for similar projects. They do not represent MTCA interpretations.

Please call if you have any questions regarding our work and this report, the presentation of the information, or the interpretation of the data.

\\seafs\Projects\Notebooks\1944900_601_Dexter_Due_Diligence\Deliverables\Reports\Phase II Final Report\Final 601 Dexter Avenue Property Ph II.docx

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-1-10	MW-1-25	MW-1-30	HC-1-5	HC-1-7.5	HC-1-10	HC-1-12.5	HC-1-15	HC-1-17.5	HC-1-20	HC-1-25	HC-1-30	HC-5-10	HC-5-15	HC-2-5	HC-2-10	HC-2-15	HC-4-10	HC-4-15	
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	
	Cleanup Level ^a																				
Moisture in %		17%	16%	17%	17%	16%	15%	16%	16%	16%	15%	17%	17%	16%	16%	16%	15%	16%	17%	14%	
NWTPH-Dx in mg/kg																					
Kerosene/Jet fuel		20 U	20 U		20 U			20 U	20 U			20 U	20 U	20 U	20 U	20 U	20 U			20 U	20 U
Diesel/Fuel oil	2000	20 U	20 U		20 U			20 U	20 U			20 U	20 U	20 U	20 U	20 U	20 U			20 U	20 U
Heavy oil	2000	50 U	50 U		50 U			50 U	50 U			50 U	50 U	50 U	50 U	50 U	50 U			50 U	50 U
NWTPH-Gx in mg/kg																					
Mineral spirits/Stoddard	100	5.0 U	5.0 U		5.0 U		5.0 U	5.0 U		5.0 U	5.0 U	5.0 U			5.0 U		5.0 U			5.0 U	5.0 U
Gasoline	30/100 ^b	5.0 U	5.0 U		5.0 U		5.0 U	5.0 U		5.0 U	290	30			5.0 U		5.0 U			5.0 U	5.0 U
BTEX in µg/kg																					
Benzene	0.03				20 U		20 U			20 U											
Toluene	7				50 U		50 U			50 U											
Ethylbenzene	6				50 U		50 U			50 U											
Xylenes	9				50 U		50 U			50 U											
Metals in mg/kg																					
Lead (Pb)	250				1.0 U			1.0 U		1.0 U	1.2 J	1.0 U			1.0 U						1.0 U
Chromium (Cr)	19/2000 ^d				1.2			1.0 U		1.0 U		1.0 U			1.0 U						1.0 U
Cadmium (Cd)	2				1.0 U			1.0 U		1.0 U		1.0 U			1.0 U						1.0 U
Arsenic (As)	20				1.0 U			1.0 U		1.0 U		1.0 U			1.0 U						1.0 U
Mercury (Hg) (7471)	2				0.5 U			0.5 U		0.5 U		0.5 U			0.5 U						0.5 U
PCBs in mg/kg																					
A1221														0.20 U							
A1232														0.20 U							
A1242 (A1016)														0.20 U							
A1248														0.20 U							
A1254														0.20 U							
A1260														0.20 U							
Total PCBs	1													0.20 U							
PAHs in mg/kg																					
1-Methylnaphthalene							0.10 U			0.10 U											0.10 U
2-Methylnaphthalene							0.10 U			0.10 U											0.10 U
Naphthalene	5						0.10 U			0.10 U											0.10 U
Acenaphthylene							0.10 U			0.10 U											0.10 U
Acenaphthene							0.10 U			0.10 U											0.10 U
Fluorene							0.10 U			0.10 U											0.10 U
Phenanthrene							0.10 U			0.10 U											0.10 U
Anthracene							0.10 U			0.10 U											0.10 U
Fluoranthene							0.10 U			0.10 U											0.10 U
Pyrene							0.10 U			0.10 U											0.10 U
Benzo(a)anthracene							0.10 U			0.10 U											0.10 U
Chrysene							0.10 U			0.10 U											0.10 U
Benzo(b)fluoranthene							0.10 U			0.10 U											0.10 U
Benzo(k)fluoranthene							0.10 U			0.10 U											0.10 U
Benzo(a)pyrene	0.1						0.10 U			0.10 U											0.10 U
Indeno(1,2,3-cd)pyrene							0.10 U			0.10 U											0.10 U
Dibenzo(ah)anthracene							0.10 U			0.10 U											0.10 U
Benzo(ghi)perylene							0.10 U			0.10 U											0.10 U
Total cPAHs TEQ	0.1						NC			NC											NC
Volatiles in µg/kg																					
MTBE	100	100 U	100 U	100 U				100 U		100 U		100 U	100 U		100 U		100 U	100 U			100 U
Dichlorodifluoromethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U			50 U

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-1-10	MW-1-25	MW-1-30	HC-1-5	HC-1-7.5	HC-1-10	HC-1-12.5	HC-1-15	HC-1-17.5	HC-1-20	HC-1-25	HC-1-30	HC-5-10	HC-5-15	HC-2-5	HC-2-10	HC-2-15	HC-4-10	HC-4-15
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019
	Cleanup Level ^a																			
Chloromethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Vinyl chloride		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Bromomethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Chloroethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Trichlorofluoromethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1-Dichloroethene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Methylene chloride	20	20 U	20 U	20 U				20 U		20 U		20 U	20 U		20 U		20 U	20 U		20 U
trans-1,2-Dichloroethene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1-Dichloroethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
2,2-Dichloropropane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
cis-1,2-Dichloroethene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Chloroform		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1,1-Trichloroethane	2000	50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Carbontetrachloride		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1-Dichloropropene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Benzene	30	20 U	20 U	20 U				20 U		20 U		20 U	20 U		20 U		20 U	20 U		20 U
1,2-Dichloroethane(EDC)		20 U	20 U	20 U				20 U		20 U		20 U	20 U		20 U		20 U	20 U		20 U
Trichloroethene	30	20 U	20 U	20 U				20 U		20 U		20 U	20 U		20 U		20 U	20 U		20 U
1,2-Dichloropropane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Dibromomethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Bromodichloromethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
cis-1,3-Dichloropropene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Toluene	7000	50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
trans-1,3-Dichloropropene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1,2-Trichloroethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Tetrachloroethene	50	50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,3-Dichloropropane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Dibromochloromethane		20 U	20 U	20 U				20 U		20 U		20 U	20 U		20 U		20 U	20 U		20 U
1,2-Dibromoethane (EDB)	5	5 U	5 U	5 U				5 U		5 U		5 U	5 U		5 U		5 U	5 U		5 U
Chlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1,1,2-Tetrachloroethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Ethylbenzene	6000	50 U	50 U	50 U				50 U		50 U		840	220		50 U		50 U	50 U		50 U
Xylenes	9000	50 U	50 U	50 U				50 U		50 U		620	190		50 U		50 U	50 U		50 U
Styrene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Bromoform		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Isopropylbenzene		50 U	50 U	50 U				50 U		50 U		660	130		50 U		50 U	50 U		50 U
1,2,3-Trichloropropane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Bromobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,1,2,2-Tetrachloroethane		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
n-Propylbenzene		50 U	50 U	50 U				50 U		50 U		1,400	320		50 U		50 U	50 U		50 U
2-Chlorotoluene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
4-Chlorotoluene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,3,5-Trimethylbenzene		50 U	50 U	50 U				50 U		50 U		1,900	430		50 U		50 U	50 U		50 U
tert-Butylbenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,2,4-Trimethylbenzene		50 U	50 U	50 U				50 U		50 U		2,800	970		50 U		50 U	50 U		50 U
sec-Butylbenzene		50 U	50 U	50 U				50 U		50 U		660	100		50 U		50 U	50 U		50 U
1,3-Dichlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
Isopropyltoluene		50 U	50 U	50 U				50 U		50 U		1,000	160		50 U		50 U	50 U		50 U
1,4-Dichlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
1,2-Dichlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U		50 U		50 U	50 U		50 U
n-Butylbenzene		50 U	50 U	50 U				50 U		50 U		1,000	170		50 U		50 U	50 U		50 U

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-1-10	MW-1-25	MW-1-30	HC-1-5	HC-1-7.5	HC-1-10	HC-1-12.5	HC-1-15	HC-1-17.5	HC-1-20	HC-1-25	HC-1-30	HC-5-10	HC-5-15	HC-2-5	HC-2-10	HC-2-15	HC-4-10	HC-4-15	
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	
	Cleanup Level ^a																				
1,2-Dibromo-3-Chloropropane		50 U	50 U	50 U				50 U		50 U		50 U	50 U			50 U		50 U	50 U		50 U
1,2,4-Trichlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U			50 U		50 U	50 U		50 U
Hexachloro-1,3-butadiene		50 U	50 U	50 U				50 U		50 U		50 U	50 U			50 U		50 U	50 U		50 U
Naphthalene	5000									50 U		50 U	50 U			50 U		50 U	50 U		50 U
1,2,3-Trichlorobenzene		50 U	50 U	50 U				50 U		50 U		50 U	50 U			50 U		50 U	50 U		50 U

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	HC-4-35	HC-3-7.5	HC-3-12.5	HC-3-15	HC-3-20	HC-3-30
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019
	Cleanup Level ^a						
Moisture in %		18%	19%	15%	18%	17%	19%
NWTPH-Dx in mg/kg							
Kerosene/Jet fuel		20 U	20 U				20 U
Diesel/Fuel oil	2000	20 U	20 U				20 U
Heavy oil	2000	50 U	50 U				50 U
NWTPH-Gx in mg/kg							
Mineral spirits/Stoddard	100	5.0 U	5.0 U				5.0 U
Gasoline	30/100 ^b	9.8	5.0 U				5.0 U
BTEX in µg/kg							
Benzene	0.03						
Toluene	7						
Ethylbenzene	6						
Xylenes	9						
Metals in mg/kg							
Lead (Pb)	250			1.0 UJ			
Chromium (Cr)	19/2000 ^d			1.0 UJ			
Cadmium (Cd)	2			1.0 U			
Arsenic (As)	20			1.0 U			
Mercury (Hg) (7471)	2			0.5 U			
PCBs in mg/kg							
A1221							
A1232							
A1242 (A1016)							
A1248							
A1254							
A1260							
Total PCBs	1						
PAHs in mg/kg							
1-Methylnaphthalene				0.10 U			
2-Methylnaphthalene				0.10 U			
Naphthalene	5			0.10 U			
Acenaphthylene				0.10 U			
Acenaphthene				0.10 U			
Fluorene				0.10 U			
Phenanthrene				0.10 U			
Anthracene				0.10 U			
Fluoranthene				0.10 U			
Pyrene				0.10 U			
Benzo(a)anthracene				0.10 U			
Chrysene				0.10 U			
Benzo(b)fluoranthene				0.10 U			
Benzo(k)fluoranthene				0.10 U			
Benzo(a)pyrene	0.1			0.10 U			
Indeno(1,2,3-cd)pyrene				0.10 U			
Dibenzo(ah)anthracene				0.10 U			
Benzo(ghi)perylene				0.10 U			
Total cPAHs TEQ	0.1			NC			
Volatiles in µg/kg							
MTBE	100	100 U	100 U		100 U	100 U	100 U
Dichlorodifluoromethane		50 U	50 U		50 U	50 U	50 U

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	HC-4-35	HC-3-7.5	HC-3-12.5	HC-3-15	HC-3-20	HC-3-30
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019
	Cleanup Level ^a						
Chloromethane		50 U	50 U		50 U	50 U	50 U
Vinyl chloride		50 U	50 U		50 U	50 U	50 U
Bromomethane		50 U	50 U		50 U	50 U	50 U
Chloroethane		50 U	50 U		50 U	50 U	50 U
Trichlorofluoromethane		50 U	50 U		50 U	50 U	50 U
1,1-Dichloroethene		50 U	50 U		50 U	50 U	50 U
Methylene chloride	20	20 U	20 U		20 U	20 U	20 U
trans-1,2-Dichloroethene		50 U	50 U		50 U	50 U	50 U
1,1-Dichloroethane		50 U	50 U		50 U	50 U	50 U
2,2-Dichloropropane		50 U	50 U		50 U	50 U	50 U
cis-1,2-Dichloroethene		50 U	50 U		50 U	50 U	50 U
Chloroform		50 U	50 U		50 U	50 U	50 U
1,1,1-Trichloroethane	2000	50 U	50 U		50 U	50 U	50 U
Carbontetrachloride		50 U	50 U		50 U	50 U	50 U
1,1-Dichloropropene		50 U	50 U		50 U	50 U	50 U
Benzene	30	20 U	20 U		20 U	20 U	20 U
1,2-Dichloroethane(EDC)		20 U	20 U		20 U	20 U	20 U
Trichloroethene	30	20 U	20 U		20 U	20 U	20 U
1,2-Dichloropropane		50 U	50 U		50 U	50 U	50 U
Dibromomethane		50 U	50 U		50 U	50 U	50 U
Bromodichloromethane		50 U	50 U		50 U	50 U	50 U
cis-1,3-Dichloropropene		50 U	50 U		50 U	50 U	50 U
Toluene	7000	50 U	50 U		50 U	50 U	50 U
trans-1,3-Dichloropropene		50 U	50 U		50 U	50 U	50 U
1,1,2-Trichloroethane		50 U	50 U		50 U	50 U	50 U
Tetrachloroethene	50	50 U	50 U		50 U	50 U	50 U
1,3-Dichloropropane		50 U	50 U		50 U	50 U	50 U
Dibromochloromethane		20 U	20 U		20 U	20 U	20 U
1,2-Dibromoethane (EDB)	5	5 U	5 U		5 U	5 U	5 U
Chlorobenzene		50 U	50 U		50 U	50 U	50 U
1,1,1,2-Tetrachloroethane		50 U	50 U		50 U	50 U	50 U
Ethylbenzene	6000	310	50 U		50 U	50 U	50 U
Xylenes	9000	190	50 U		50 U	50 U	50 U
Styrene		50 U	50 U		50 U	50 U	50 U
Bromoform		50 U	50 U		50 U	50 U	50 U
Isopropylbenzene		79	50 U		50 U	50 U	50 U
1,2,3-Trichloropropane		50 U	50 U		50 U	50 U	50 U
Bromobenzene		50 U	50 U		50 U	50 U	50 U
1,1,2,2-Tetrachloroethane		50 U	50 U		50 U	50 U	50 U
n-Propylbenzene		50 U	50 U		50 U	50 U	50 U
2-Chlorotoluene		50 U	50 U		50 U	50 U	50 U
4-Chlorotoluene		50 U	50 U		50 U	50 U	50 U
1,3,5-Trimethylbenzene		180	50 U		50 U	50 U	50 U
tert-Butylbenzene		50 U	50 U		50 U	50 U	50 U
1,2,4-Trimethylbenzene		370	50 U		50 U	50 U	50 U
sec-Butylbenzene		50 U	50 U		50 U	50 U	50 U
1,3-Dichlorobenzene		50 U	50 U		50 U	50 U	50 U
Isopropyltoluene		50 U	50 U		50 U	50 U	50 U
1,4-Dichlorobenzene		50 U	50 U		50 U	50 U	50 U
1,2-Dichlorobenzene		50 U	50 U		50 U	50 U	50 U
n-Butylbenzene		50 U	50 U		50 U	50 U	50 U

U = Not detected at detection limit indicated

Table 1 - Analytical Results for Soil Samples

Sample ID	MTCA	HC-4-35	HC-3-7.5	HC-3-12.5	HC-3-15	HC-3-20	HC-3-30
Sampling Date	Method A	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019	4/11/2019
	Cleanup Level ^a						
1,2-Dibromo-3-Chloropropane		50 U	50 U		50 U	50 U	50 U
1,2,4-Trichlorobenzene		50 U	50 U		50 U	50 U	50 U
Hexachloro-1,3-butadiene		50 U	50 U		50 U	50 U	50 U
Naphthalene	5000	50 U	50 U		50 U	50 U	50 U
1,2,3-Trichlorobenzene		50 U	50 U		50 U	50 U	50 U

J = Estimated value.
 Detected concentrations are bolded.
 Concentrations that exceed cleanup level are shaded.
 a. Method A soil cleanup level for unrestricted land uses.
 b. 30 when benzene present/100 without benzene.
 c. 19 as Chromium VI/2000 as Chromium III.
 NC = Not calculated.

Table 2 - Analytical Results for Groundwater Samples

Sample ID	MTCA	HC-1-TMW	HC-4
Sampling Date	Method A	/11/2019	4/12/2019
	Cleanup		
	Level		
Total Susp. Solids in mg/L		160 J	
NWTPH-Dx in mg/L			
Kerosene/Jet fuel		0.20 U	0.20 U
Diesel/Fuel oil	0.5	0.20 U	0.20 U
Heavy oil	0.5	0.50 U	0.50 U
NWTPH-Gx in mg/L			
Mineral spirits/Stoddard		0.10 U	0.10 U
Gasoline	0.8/1.0 ^a	6.9	0.10 U
Dissolved Metals in mg/L			
Lead (Pb)	0.015	0.002 U	
Chromium (Cr)	0.05	0.01 U	
Cadmium (Cd)	0.005	0.005 U	
Arsenic (As)	0.005	0.005 U	
Mercury (Hg) (7470A)	0.002	0.0005 U	
Total Metals in mg/L			
Lead (Pb)	0.015	0.006	0.002
Chromium (Cr)	0.05	0.01 U	0.01 U
Cadmium (Cd)	0.005	0.005 U	0.005 U
Arsenic (As)	0.005	0.005 U	0.005 U
Mercury (Hg) (7470A)	0.002	0.0005 U	0.0005 U
PAHs in µg/L			
Naphthalene			0.1 U
1-MethylNaphthalene			0.1 U
2-MethylNaphthalene			0.1 U
Acenaphthylene			0.1 U
Acenaphthene			0.1 U
Fluorene			0.1 U
Phenanthrene			0.1 U
Anthracene			0.1 U
Fluoranthene			0.1 U
Pyrene			0.1 U
Benzo(a)anthracene			0.1 U
Chrysene			0.1 U
Benzo(b)fluoranthene			0.1 U
Benzo(k)fluoranthene			0.1 U
Benzo(a)pyrene	0.1		0.1 U
Indeno(1,2,3-cd)pyrene			0.1 U
Dibenzo(ah)anthracene			0.1 U
Benzo(ghi)perylene			0.1 U
Volatiles in µg/L			
MTBE	20	5.0 U	5.0 U
Chloromethane		1.0 U	1.0 U
Vinyl chloride(*)	0.2	0.2 U	0.2 U
Bromomethane		1.0 U	1.0 U
Chloroethane		1.0 U	1.0 U
Trichlorofluoromethane		1.0 U	1.0 U
1,1-Dichloroethene		1.0 U	1.0 U

Table 2 - Analytical Results for Groundwater Samples

Sample ID Sampling Date	MTCA Method A Cleanup Level	HC-1-TMW /11/2019	HC-4 4/12/2019
Methylene chloride	5	1.0 U	1.0 U
trans-1,2-Dichloroethene		1.0 U	1.0 U
1,1-Dichloroethane		1.0 U	1.0 U
2,2-Dichloropropane		1.0 U	1.0 U
cis-1,2-Dichloroethene		1.0 U	1.0 U
Chloroform		1.0 U	1.0 U
1,1,1-Trichloroethane	200	1.0 U	1.0 U
Carbontetrachloride		1.0 U	1.0 U
1,1-Dichloropropene		1.0 U	1.0 U
Benzene	5	1.0 U	1.0 U
1,2-Dichloroethane(EDC)	5	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U
1,2-Dichloropropane		1.0 U	1.0 U
Dibromomethane		1.0 U	1.0 U
Bromodichloromethane		1.0 U	1.0 U
cis-1,3-Dichloropropene		1.0 U	1.0 U
Toluene	1000	1.0 U	1.0 U
trans-1,3-Dichloropropene		1.0 U	1.0 U
1,1,2-Trichloroethane		1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U
1,3-Dichloropropane		1.0 U	1.0 U
Dibromochloromethane		1.0 U	1.0 U
1,2-Dibromoethane (EDB)*	0.01	0.01 U	0.01 U
Chlorobenzene		1.0 U	1.0 U
1,1,1,2-Tetrachloroethane		1.0 U	1.0 U
Ethylbenzene	700	25	1.0 U
Xylenes	1000	11	1.0 U
Styrene		1.0 U	1.0 U
Bromoform		1.0 U	1.0 U
Isopropylbenzene		37	1.0 U
1,2,3-Trichloropropane		1.0 U	1.0 U
Bromobenzene		1.0 U	1.0 U
1,1,2,2-Tetrachloroethane		1.0 U	1.0 U
n-Propylbenzene		51	1.0 U
2-Chlorotoluene		1.0 U	1.0 U
4-Chlorotoluene		1.0 U	1.0 U
1,3,5-Trimethylbenzene		81	1.0 U
tert-Butylbenzene		1.1	1.0 U
1,2,4-Trimethylbenzene		150	1.0 U
sec-Butylbenzene		12	1.0 U
1,3-Dichlorobenzene		1.0 U	1.0 U
Isopropyltoluene		19	1.0 U
1,4-Dichlorobenzene		1.0 U	1.0 U
1,2-Dichlorobenzene		1.0 U	1.0 U
n-Butylbenzene		12	1.0 U
1,2-Dibromo-3-Chloropropane		1.0 U	1.0 U
1,2,4-Trichlorobenzene		1.0 U	1.0 U

Hart Crowser

Table 2 - Analytical Results for Groundwater Samples

Sheet 3 of 3

Sample ID	MTCA	HC-1-TMW	HC-4
Sampling Date	Method A	/11/2019	4/12/2019
	Cleanup		
	Level		
Hexachloro-1,3-butadiene		1.0 U	1.0 U
Naphthalene	160	1.0 U	1.0 U
1,2,3-Trichlorobenzene		1.0 U	1.0 U

U = Not detected at reporting limit indicated.

J = Estimated value.

a. 0.8 mg/L when benzene is present in groundwater; 1.0 when benzene is not detected.

Detected concentrations are bolded.

Concentrations that exceed cleanup level are shaded.

Hart Crowser

Table 3 - Analytical Results for Sub-Slab Soil Vapor Samples

Sample ID Sampling Date	MTCA Method B		
	Sub-Slab Soil Gas Screening Level	SV-1 4/9/2019	SV-2 4/10/2019
Helium in ppt		100 U	100 U
Method EPA3C in %			
Carbon Dioxide		0.124	0.066 U
Methane		0.069 U	0.066 U
Oxygen		23.8	24.1
Method EPA-TO-15 in ug/m3			
1,1,1-Trichloroethane		0.546 U	0.546 U
1,1,2,2-Tetrachloroethane		0.515 U	0.515 U
1,1,2-Trichloroethane		0.682 U	0.682 U
1,1-Dichloroethane		0.202 U	0.202 U
1,1-Dichloroethene		0.397 U	0.397 U
1,2,4-Trichlorobenzene		0.557 UJ	0.557 UJ
1,2,4-Trimethylbenzene	107	14.9	7.35
1,2-Dichlorobenzene	3,050	0.601 U	0.601 U
1,2-Dichloroethane		0.202 U	0.202 U
1,2-Dichloropropane		0.578 U	0.578 U
1,3,5-Trimethylbenzene		9.61	1.88
1,3-Butadiene	2.78	0.285	0.946
1,3-Dichlorobenzene		0.681	1.78
1,4-Dichlorobenzene	7.58	0.451 U	1.98
1-Propene		2.29	0.172 U
2-Butanone		7.86	5.03
2-Hexanone		1.02 UJ	1.02 UJ
Acetone		49.4	81.3
Acrolein	0.305	1.02	0.855
APH C5 - C8 Aliphatics	90,000	144	1030
APH C9 - C12 Aliphatics	4,700	1050	442 U
APH C9 - C10 Aromatics	6,000	191	31.4 U
Benzene	10.7	2.9	2.93
Benzene, 1-Ethyl-4-Methyl-		2.06	2.11
Bromoform		0.517 U	0.517 U
Bromomethane		0.485 U	0.485 U
Carbon Disulfide	10,700	1.17 U	1.17 U
Carbon Tetrachloride	13.9	0.574	0.513
CFC-11	10,700	1.75	1.63
CFC-113		0.766 U	0.766 U
CFC-114		0.699 U	0.699 U
CFC-12	1,520	2.33	2.11
Chlorobenzene	762	0.23 U	0.288
Chlorodibromomethane		1.06 U	1.06 U
Chloroethane		0.264 U	0.264 U
Chloroform	3.62	0.871	0.244 U
Chloromethane		0.258 U	0.258 U
Cis-1,2-Dichloroethene		0.198 U	0.198 U
Cis-1,3-Dichloropropene		0.454 U	0.454 U
Cyclohexane		0.401	5.08
Dichlorobromomethane		0.502 U	0.502 U
Dioxane, 1,4-		0.36 UJ	0.36 UJ
Ethyl Acetate		0.901 U	4.17

Hart Crowser

Table 3 - Analytical Results for Sub-Slab Soil Vapor Samples

Sample ID Sampling Date	MTCA Method B		
	Sub-Slab Soil Gas Screening Level	SV-1 4/9/2019	SV-2 4/10/2019
Ethylbenzene	15,200	0.954	1.67
Ethylene dibromide		0.384 U	0.384 U
Heptane		0.517	6.9
Hexachlorobutadiene		2.67 U	2.67 U
Hexane	10,700	0.434	12.6
Isopropyl Alcohol		4.43	11.4
m, p-Xylene	1,520	3.39	6.93
Methyl isobutyl ketone	45,700	1.02 U	1.02 U
Methyl Methacrylate		0.409 U	0.409 U
Methyl t-butyl ether	321	0.361 U	1.02
Methylene Chloride	8,330	1.74 UJ	1.74 UJ
Naphthalene	2.45	3.31	2.77
o-Xylene	1,520	1.47	2.45
Styrene		0.481	0.426 U
Tetrachloroethene	321	1.9	1.09
Tetrahydrofuran		0.295 U	0.511
Toluene	76,200	8.18	7.25
Toluene, Alpha-Chloro-		0.647 U	0.647 U
Trans-1,2-Dichloroethene		0.198 U	0.198 U
Trans-1,3-Dichloropropene		0.567 U	0.567 U
Trichloroethene	12.3	0.0872 U	0.228
Vinyl Acetate	3,050	0.88 U	0.88 U
Vinyl Chloride	9.33	0.0685 U	0.0685 U
Total TPH	4,700	1405.2	1054

U = Not detected at the reporting limit indicated.

J = Estimated value.

Detected concentrations are bolded.

Concentrations that exceed screening level are shaded.

Table 4 - Analytical Results for Crawl Space Samples

Sample ID Sampling Date	MTCA Method B		
	Indoor Air Cleanup Level	CSE-1 4/10/2019	CSW-1 4/10/2019
Method EPA-TO-15 in ug/m3			
1,1,1-Trichloroethane		0.546 U	0.546 U
1,1,2,2-Tetrachloroethane		0.515 U	0.515 U
1,1,2-Trichloroethane		0.682 U	0.682 U
1,1-Dichloroethane		0.202 U	0.202 U
1,1-Dichloroethene		0.397 U	0.397 U
1,2,4-Trichlorobenzene		0.557 UJ	0.557 UJ
1,2,4-Trimethylbenzene	3.2	0.369 U	0.369 U
1,2-Dichlorobenzene	91.4	0.601 U	0.601 U
1,2-Dichloroethane		0.202 U	0.202 U
1,2-Dichloropropane		0.578 U	0.578 U
1,3,5-Trimethylbenzene		0.369 U	0.369 U
1,3-Butadiene	0.0833	0.277 U	0.91
1,3-Dichlorobenzene		0.451 U	0.451 U
1,4-Dichlorobenzene	0.227	0.451 U	0.451 U
1-Propene		0.172 U	0.172 U
2-Butanone		1.13	1.14
2-Hexanone		1.02 UJ	1.02 UJ
Acetone		8.26	9.29
Acrolein	0.00914	1.27	1.56
APH C5 - C8 Aliphatics	2,700	132	183
APH C9 - C12 Aliphatics	140	44.2 U	44.2 U
APH C9 - C10 Aromatics	180	31.4 U	31.4 U
Benzene	0.321	0.586 U	0.761 U
Benzene, 1-Ethyl-4-Methyl-		0.492 U	0.492 U
Bromoform		0.517 U	0.517 U
Bromomethane		0.485 U	0.485 U
Carbon Disulfide	320	1.17 U	1.17 U
Carbon Tetrachloride	0.417	0.469	0.468
CFC-11	320	1.38	1.53
CFC-113		0.766 U	0.766 U
CFC-114		0.699 U	0.699 U
CFC-12	45.7	1.72	1.8
Chlorobenzene	22.9	0.23 U	0.23 U
Chlorodibromomethane		1.06 U	1.06 U
Chloroethane		0.264 U	0.264 U
Chloroform	0.109	<i>0.244 U</i>	<i>0.244 U</i>
Chloromethane		1.1	1.18
Cis-1,2-Dichloroethene		0.198 U	0.198 U
Cis-1,3-Dichloropropene		0.454 U	0.454 U
Cyclohexane		0.629	0.878
Dichlorobromomethane		0.502 U	0.502 U
Dioxane, 1,4-		0.36 UJ	0.36 UJ
Ethyl Acetate		0.901 U	1.32
Ethylbenzene	457	0.434 U	0.434 U
Ethylene dibromide		0.384 U	0.384 U
Heptane		0.433	0.652
Hexachlorobutadiene		2.67 U	2.67 U
Hexane	320	1.74	3.21

Table 4 - Analytical Results for Crawl Space Samples

Sample ID Sampling Date	MTCA Method B		
	Indoor Air Cleanup Level	CSE-1 4/10/2019	CSW-1 4/10/2019
Isopropyl Alcohol		2.4	2.48
m, p-Xylene	45.7	0.868 U	0.868 U
Methyl isobutyl ketone	1,370	1.02 U	1.02 U
Methyl Methacrylate		0.409 U	0.409 U
Methyl t-butyl ether	9.62	0.361 U	0.361 U
Methylene Chloride	250	1.74 UJ	1.74 UJ
Naphthalene	0.0735	1.56	1.56
o-Xylene	45.7	0.434 U	0.434 U
Styrene		0.426 U	0.426 U
Tetrachloroethene	9.62	0.339 U	0.339 U
Tetrahydrofuran		0.295 U	0.295 U
Toluene	2,290	1.15	1.18
Toluene, Alpha-Chloro-		0.647 U	0.647 U
Trans-1,2-Dichloroethene		0.198 U	0.198 U
Trans-1,3-Dichloropropene		0.567 U	0.567 U
Trichloroethene	0.37	0.0872 U	0.0872 U
Vinyl Acetate	91.4	0.88 U	0.88 U
Vinyl Chloride	0.28	0.0685 U	0.0685 U
Total TPH	140	134.71	185.74

U = Not detected at the reporting limit indicated.

J = Estimated value.

Detected concentrations are bolded.

Concentrations that exceed cleanup level are shaded.

Samples with reporting limits exceeding cleanup level are italicized.

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	DGW1-10	DGW1-12.5	DGW1-15	DGW1-25	DGW1-30	DGW3-2.5	DGW3-12.5	DGW3-15	DGW3-20	DGW3-25	DGW4-5	DGW4-10	DGW4-15	DGW4-20	DGW4-35	DGW4-50
Sample Depth		3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019
Sampling Date	Method A Cleanup Level ^a	10	12.5	15	25	30	2.5	12.5	15	20	25	5	10	15	20	35	50
Moisture in %		13% J	14% J	14% J	16% J	14% J	15% J	15% J	14% J	14% J	14% J	11% J	12% J	12% J	13% J	14% J	13% J
NWTPH-Dx in mg/kg																	
Kerosene/Jet fuel		20 U	20 U	20 U	20 U	20 U	20 U	20 U			20 U	20 U		20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000	20 U	20 U	20 U	20 U	20 U	20 U	20 U			20 U	20 U		20 U	20 U	20 U	20 U
Heavy oil	2000	50 U	50 U	50 U	50 U	50 U	50 U	50 U			50 U	50 U		50 U	50 U	50 U	50 U
NWTPH-Gx in mg/kg																	
Mineral spirits/Stoddard	100	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U			5.0 U	5.0 U		5.0 U	5.0 U	5.0 U	5.0 U
Gasoline	30/100 ^b	5.0 U	5.0 U	5.0 U	5.0 U		5.0 U	5.0 U			5.0 U	5.0 U		5.0 U	5.0 U	5.0 U	5.0 U
BTEX in µg/kg																	
Benzene	0.03																
Toluene	7																
Ethylbenzene	6																
Xylenes	9																
Metals in mg/kg																	
Lead (Pb)	250	5.8 U			5.5 U		5.5 U	5.6 U			5.5 U	5.8 U		27	5.3 U	6 U	
Chromium (Cr)	19/2000 ^d	34			29		25	30			23	34		47	22	67	
Cadmium (Cd)	2	0.58 U			0.55 U		0.55 U	0.56 U			0.55 U	0.58 U		0.54 U	0.53 U	0.6 U	
Arsenic (As)	20	12 U			11 U		11 U	11 U			11 U	12 U		11 U	11 U	12 U	
Mercury (Hg) (7471)	2	0.29 U			0.28 U		0.28 U	0.28 U			0.28 U	0.29 U		0.27 U	0.27 U	0.3 U	
PCBs in mg/kg																	
A1221																	
A1232																	
A1242 (A1016)																	
A1248																	
A1254																	
A1260																	
Total PCBs	1																
PAHs in mg/kg																	
1-Methylnaphthalene		1.0 U															
2-Methylnaphthalene		1.0 U															
Naphthalene	5	1.0 U															
Acenaphthylene		1.0 U															
Acenaphthene		1.0 U															
Fluorene		1.0 U															
Phenanthrene		1.0 U															
Anthracene		1.0 U															
Fluoranthene		1.0 U															
Pyrene		1.0 U															
Benzo(a)anthracene		1.0 U															
Chrysene		1.0 U															
Benzo(b)fluoranthene		1.0 U															
Benzo(k)fluoranthene		1.0 U															
Benzo(a)pyrene	0.1	1.0 U															
Indeno(1,2,3-cd)pyrene		1.0 U															
Dibenzo(ah)anthracene		1.0 U															
Benzo(ghi)perylene		1.0 U															
Total cPAHs TEQ	0.1	NC															
Volatiles in µg/kg																	
MTBE	100	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Dichlorodifluoromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Chloromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Vinyl chloride		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Bromomethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Chloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Trichlorofluoromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	DGW1-10	DGW1-12.5	DGW1-15	DGW1-25	DGW1-30	DGW3-2.5	DGW3-12.5	DGW3-15	DGW3-20	DGW3-25	DGW4-5	DGW4-10	DGW4-15	DGW4-20	DGW4-35	DGW4-50
Sample Depth		3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/6/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019
Sampling Date	Method A Cleanup Level ^a	10	12.5	15	25	30	2.5	12.5	15	20	25	5	10	15	20	35	50
1,1-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Methylene chloride	20	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
trans-1,2-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1-Dichloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2,2-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
cis-1,2-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Chloroform		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1,1-Trichloroethane	2000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Carbontetrachloride		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	30	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,2-Dichloroethane(EDC)		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Trichloroethene	30	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,2-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Dibromomethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Bromodichloromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
cis-1,3-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Toluene	7000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
trans-1,3-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1,2-Trichloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Tetrachloroethene	50	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,3-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Dibromochloromethane		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,2-Dibromoethane (EDB)*	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1,1,2-Tetrachloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Ethylbenzene	6000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Xylenes	9000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Styrene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Bromoform		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Isopropylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2,3-Trichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Bromobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,1,2,2-Tetrachloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
n-Propylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,3,5-Trimethylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
tert-Butylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2,4-Trimethylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
sec-Butylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,3-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Isopropyltoluene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,4-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
n-Butylbenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2-Dibromo-3-Chloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2,4-Trichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Hexachloro-1,3-butadiene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Naphthalene	5000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
1,2,3-Trichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	DMW1S-5	DMW1S-10	DMW1S-12.5	DMW1S-15	DMW1S-20	DPP2-5	DPP2-10	DPP4-12.5	DPP4-17.5	DPP4-20	21417-GP7	21417-GP7	21417-GP6	DPP-4	DPP-2
Sample Depth		3/23/2019	3/23/2019	3/23/2019	3/23/2019	3/23/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	5/19/2017	5/19/2017	5/19/2017	4/11/2019	4/11/2019
Sampling Date	Method A Cleanup Level ^a	5	10	12.5	15	20	5	10	12.5	17.5	20	2	13	18		
Moisture in %		14% J	15% J	14% J	14% J	15% J	15% J	15% J	8%	20%	17%					
NWTPH-Dx in mg/kg																
Kerosene/Jet fuel		20 U	20 U	20 U		20 U	20 U	20 U	20 U		20 U	---	---	---		
Diesel/Fuel oil	2000	20 U	20 U	20 U		20 U	20 U	20 U	20 U		20 U	<20.4	<20.4	<20.4		
Heavy oil	2000	50 U	50 U	50 U		50 U	50 U	50 U	50 U		50 U	<50.9	<50.9	<50.9		
NWTPH-Gx in mg/kg																
Mineral spirits/Stoddard	100	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U						---	---	---		
Gasoline	30/100 ^b	5.0 U	5.0 U	1200	67	5.0 U						<3.71	<3.71	<3.71		
BTEX in µg/kg																
Benzene	0.03											ND	ND	ND		
Toluene	7											ND	ND	ND		
Ethylbenzene	6											<0.0223	<0.0223	<0.0223		
Xylenes	9											<0.0148	<0.0148	<0.0148		
Metals in mg/kg																
Lead (Pb)	250		5.8 U		5.4 U	5.5 U	6 U	5.4 U	5.4 U		6 U					
Chromium (Cr)	19/2000 ^d		31		23	35	43	34	24		31	---	---	---		
Cadmium (Cd)	2		0.58 U		0.54 U	0.55 U	0.6 U	0.54 U	0.54 U		0.6 U	---	---	---		
Arsenic (As)	20		12 U		11 U	11 U	12 U	11 U	11 U		12 U	---	---	---		
Mercury (Hg) (7471)	2		0.29 U		0.27 U	0.27 U	0.3 U	0.27 U	0.27 U		0.3 U	---	---	---		
PCBs in mg/kg																
A1221												---	---	---		
A1232												---	---	---		
A1242 (A1016)												---	---	---		
A1248												---	---	---		
A1254												---	---	---		
A1260												---	---	---		
Total PCBs	1											---	---	---		
PAHs in mg/kg																
1-Methylnaphthalene					1.0 U							---	---	---		
2-Methylnaphthalene					1.0 U							---	---	---		
Naphthalene	5				1.0 U							---	---	---		
Acenaphthylene					1.0 U							---	---	---		
Acenaphthene					1.0 U							---	---	---		
Fluorene					1.0 U							---	---	---		
Phenanthrene					1.0 U							---	---	---		
Anthracene					1.0 U							---	---	---		
Fluoranthene					1.0 U							---	---	---		
Pyrene					1.0 U							---	---	---		
Benzo(a)anthracene					1.0 U							---	---	---		
Chrysene					1.0 U							---	---	---		
Benzo(b)fluoranthene					1.0 U							---	---	---		
Benzo(k)fluoranthene					1.0 U							---	---	---		
Benzo(a)pyrene	0.1				1.0 U							---	---	---		
Indeno(1,2,3-cd)pyrene					1.0 U							---	---	---		
Dibenzo(ah)anthracene					1.0 U							---	---	---		
Benzo(ghi)perylene					1.0 U							---	---	---		
Total cPAHs TEQ	0.1				NC							---	---	---		
Volatiles in µg/kg																
MTBE	100	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	ND U	ND U	ND U		
Dichlorodifluoromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Chloromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Vinyl chloride		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Bromomethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Chloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Trichlorofluoromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	DMW1S-5	DMW1S-10	DMW1S-12.5	DMW1S-15	DMW1S-20	DPP2-5	DPP2-10	DPP4-12.5	DPP4-17.5	DPP4-20	21417-GP7	21417-GP7	21417-GP6	DPP-4	DPP-2
Sample Depth		3/23/2019	3/23/2019	3/23/2019	3/23/2019	3/23/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	3/4/2019	5/19/2017	5/19/2017	5/19/2017	4/11/2019	4/11/2019
Sampling Date	Method A	5	10	12.5	15	20	5	10	12.5	17.5	20	2	13	18		
	Cleanup Level ^a															
1,1-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Methylene chloride	20	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	ND U	ND U	ND U		
trans-1,2-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1-Dichloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
2,2-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
cis-1,2-Dichloroethene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Chloroform		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1,1-Trichloroethane	2000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Carbontetrachloride		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Benzene	30	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	ND U	ND U	ND U		
1,2-Dichloroethane(EDC)		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	ND U	ND U	ND U		
Trichloroethene	30	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	ND U	ND U	ND U		
1,2-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Dibromomethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Bromodichloromethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
cis-1,3-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Toluene	7000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
trans-1,3-Dichloropropene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1,2-Trichloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Tetrachloroethene	50	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,3-Dichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Dibromochloromethane		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	ND U	ND U	ND U		
1,2-Dibromoethane (EDB)*	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	ND U	ND U	ND U		
Chlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1,1,2-Tetrachloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Ethylbenzene	6000	50 U	53	2100	120	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Xylenes	9000	50 U	71	4400	200	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Styrene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Bromoform		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Isopropylbenzene		50 U	50 U	1500	120	50 U	50 U	50 U	50 U	50 U	50 U	<.0594 U	<.0594 U	<.0594 U		
1,2,3-Trichloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Bromobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,1,2,2-Tetrachloroethane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
n-Propylbenzene		50 U	110	3200	280	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
2-Chlorotoluene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
4-Chlorotoluene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,3,5-Trimethylbenzene		50 U	190	6200	760	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
tert-Butylbenzene		50 U	50 U	105	50 U	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
1,2,4-Trimethylbenzene		50 U	510	13000	1900	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
sec-Butylbenzene		50 U	71	1900	250	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
1,3-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Isopropyltoluene		50 U	120	3200	480	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,4-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,2-Dichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
n-Butylbenzene		50 U	180	820	580	50 U	50 U	50 U	50 U	50 U	50 U	<.0148 U	<.0148 U	<.0148 U		
1,2-Dibromo-3-Chloropropane		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
1,2,4-Trichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Hexachloro-1,3-butadiene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		
Naphthalene	5000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	<.0223	<.0223	<.0223		
1,2,3-Trichlorobenzene		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	ND U	ND U	ND U		

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	21417-GP5	21417-GP5	DGW-3	21417-GP4	21417-GP4	DGW-1	DMW-1S
Sample Depth		5/19/2017	5/19/2017	4/11/2019	4/21/2017	4/21/2017	4/11/2019	4/11/2019
Sampling Date	Method A Cleanup Level ^a	1	14		12	15		
Moisture in %							16%	15%
NWTPH-Dx in mg/kg								
Kerosene/Jet fuel		---	---	20 U	---	---		
Diesel/Fuel oil	2000	<20.9	<20.4	20 U	<21.2	<20.9		
Heavy oil	2000	<52.4	<50.9	50 U	<53.0	<52.2		
NWTPH-Gx in mg/kg								
Mineral spirits/Stoddard	100	---	---	5.0 U	---	---		5.0 U
Gasoline	30/100 ^b	<4.32	<3.71	5.0 U	14.6	269		5.0 U
BTEX in µg/kg								
Benzene	0.03	ND	ND		ND	ND		20 U
Toluene	7	ND	ND		ND	ND		50 U
Ethylbenzene	6	<0.0259	<0.0223		0.0414	0.458		50 U
Xylenes	9	<0.0173	<0.0148		0.0607	0.381		50 U
Metals in mg/kg								
Lead (Pb)	250				---	1.5		1.0 U
Chromium (Cr)	19/2000 ^d	20.7	---		---	---		1.0 U
Cadmium (Cd)	2	39.1	---		---	---		1.0 U
Arsenic (As)	20	<0.178	---		---	---		1.0 U
Mercury (Hg) (7471)	2	4.6	---		---	---		0.5 U
PCBs in mg/kg								
A1221		---	---					
A1232		---	---					
A1242 (A1016)		---	---					
A1248		---	---					
A1254		---	---					
A1260		---	---					
Total PCBs	1	---	---					
PAHs in mg/kg								
1-Methylnaphthalene		<.0420	---					0.10 U
2-Methylnaphthalene		<.0420	---					0.10 U
Naphthalene	5	<.0420	---					0.10 U
Acenaphthylene		<.0420	---					0.10 U
Acenaphthene		<.0420	---					0.10 U
Fluorene		<.0420	---					0.10 U
Phenanthrene		<.0420	---					0.10 U
Anthracene		<.0420	---					0.10 U
Fluoranthene		<.0420	---					0.10 U
Pyrene		<.0420	---					0.10 U
Benzo(a)anthracene		ND	---					0.10 U
Chrysene		ND	---					0.10 U
Benzo(b)fluoranthene		ND	---					0.10 U
Benzo(k)fluoranthene		ND	---					0.10 U
Benzo(a)pyrene	0.1	ND	---					0.10 U
Indeno(1,2,3-cd)pyrene		ND	---					0.10 U
Dibenzo(ah)anthracene		ND	---					0.10 U
Benzo(ghi)perylene		ND	---					0.10 U
Total cPAHs TEQ	0.1	0.01	---					NC
Volatiles in µg/kg								
MTBE	100	ND	ND	100 U	ND	ND	100 U	
Dichlorodifluoromethane		ND	ND	50 U	ND	ND	50 U	
Chloromethane		ND	ND	50 U	ND	ND	50 U	
Vinyl chloride		ND	ND	50 U	ND	ND	50 U	
Bromomethane		ND	ND	50 U	ND	ND	50 U	
Chloroethane		ND	ND	50 U	ND	ND	50 U	
Trichlorofluoromethane		ND	ND	50 U	ND	ND	50 U	

Table 5 - Historical Analytical Results for Soil Samples at 615 Dexter Property

Sample ID	MTCA	21417-GP5	21417-GP5	DGW-3	21417-GP4	21417-GP4	DGW-1	DMW-1S
Sample Depth		5/19/2017	5/19/2017	4/11/2019	4/21/2017	4/21/2017	4/11/2019	4/11/2019
Sampling Date	Method A	1	14		12	15		
	Cleanup Level ^a							
1,1-Dichloroethene		ND	ND	50 U	ND	ND	50 U	
Methylene chloride	20	ND	ND	20 U	ND	ND	20 U	
trans-1,2-Dichloroethene		ND	ND	50 U	ND	ND	50 U	
1,1-Dichloroethane		ND	ND	50 U	ND	ND	50 U	
2,2-Dichloropropane		ND	ND	50 U	ND	ND	50 U	
cis-1,2-Dichloroethene		ND	ND	50 U	ND	ND	50 U	
Chloroform		ND	ND	50 U	ND	ND	50 U	
1,1,1-Trichloroethane	2000	ND	ND	50 U	ND	ND	50 U	
Carbontetrachloride		ND	ND	50 U	ND	ND	50 U	
1,1-Dichloropropene		ND	ND	50 U	ND	ND	50 U	
Benzene	30	ND	ND	20 U	ND	ND	20 U	
1,2-Dichloroethane(EDC)		ND	ND	20 U	ND	ND	20 U	
Trichloroethene	30	ND	ND	20 U	ND	ND	20 U	
1,2-Dichloropropane		ND	ND	50 U	ND	ND	50 U	
Dibromomethane		ND	ND	50 U	ND	ND	50 U	
Bromodichloromethane		ND	ND	50 U	ND	ND	50 U	
cis-1,3-Dichloropropene		ND	ND	50 U	ND	ND	50 U	
Toluene	7000	ND	ND	50 U	ND	ND	50 U	
trans-1,3-Dichloropropene		ND	ND	50 U	ND	ND	50 U	
1,1,2-Trichloroethane		ND	ND	50 U	ND	ND	50 U	
Tetrachloroethene	50	ND	ND	50 U	ND	ND	50 U	
1,3-Dichloropropane		ND	ND	50 U	ND	ND	50 U	
Dibromochloromethane		ND	ND	20 U	ND	ND	20 U	
1,2-Dibromoethane (EDB)*	5	ND	ND	5 U	ND	ND	5 U	
Chlorobenzene		ND	ND	50 U	ND	ND	50 U	
1,1,1,2-Tetrachloroethane		ND	ND	50 U	ND	ND	50 U	
Ethylbenzene	6000	ND	ND	50 U	ND	ND	50 U	
Xylenes	9000	ND	ND	50 U	ND	ND	50 U	
Styrene		ND	ND	50 U	ND	ND	50 U	
Bromoform		ND	ND	50 U	ND	ND	50 U	
Isopropylbenzene		<.0691	<.0594	50 U	<.0797	0.2	50 U	
1,2,3-Trichloropropane		ND	ND	50 U	ND	ND	50 U	
Bromobenzene		ND	ND	50 U	ND	ND	50 U	
1,1,2,2-Tetrachloroethane		ND	ND	50 U	ND	ND	50 U	
n-Propylbenzene		<.0173	<.0148	50 U	0	0.4	50 U	
2-Chlorotoluene		ND	ND	50 U	ND	0	50 U	
4-Chlorotoluene		ND	ND	50 U	ND	ND	50 U	
1,3,5-Trimethylbenzene		<.0173	<.0148	50 U	<.0199	0.7	50 U	
tert-Butylbenzene		<.0173	<.0148	50 U	<.0199	0	50 U	
1,2,4-Trimethylbenzene		<.0173	<.0148	50 U	0.1	1.6	50 U	
sec-Butylbenzene		<.0173	<.0148	50 U	<.0199	0.3	50 U	
1,3-Dichlorobenzene		ND	ND	50 U	ND	ND	50 U	
Isopropyltoluene		ND	ND	50 U	ND	ND	50 U	
1,4-Dichlorobenzene		ND	ND	50 U	ND	ND	50 U	
1,2-Dichlorobenzene		ND	ND	50 U	ND	ND	50 U	
n-Butylbenzene		<.0173	<.0148	50 U	<.0199	0.5	50 U	
1,2-Dibromo-3-Chloropropane		ND	ND	50 U	ND	ND	50 U	
1,2,4-Trichlorobenzene		ND	ND	50 U	ND	ND	50 U	
Hexachloro-1,3-butadiene		ND	ND	50 U	ND	ND	50 U	
Naphthalene	5000	<.0259	<.0223		0.1	0.9	50 U	
1,2,3-Trichlorobenzene		ND	ND	50 U	ND	ND	50 U	

U = Not detected at detection limit indicated.
 J = Estimated value.
 ND = Not detected.
 --- = Not analyzed.

Table 6 - Historical Analytical Results for Groundwater Samples at 615 Dexter Property Sheet 1 of 2

Sample ID	MTCA	HC-1-TMW	DGW1-GW	DGW3-GW	DGW4-GW	DMW-1S-GW-21
Sampling Date	Method A	4/11/2019	3/6/2019	3/6/2019	3/4/2019	03/25/19
	Cleanup Level					
Total Susp. Solids in mg/L		160 J	5600	20000	42000	31
NWTPH-Dx in mg/L						
Kerosene/Jet fuel		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Diesel/Fuel oil	0.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Heavy oil	0.5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
NWTPH-Gx in mg/L						
Mineral spirits/Stoddard		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Gasoline	0.8/1.0 ^a	6.9	0.34	0.10 U	0.10 U	0.35
Dissolved Metals in mg/L						
Lead (Pb)	0.015	0.002 U	0.0010 U	0.0010 U	0.0010 U	
Chromium (Cr)	0.05	0.01 U	0.0100 U	0.0100 U	0.0100 U	
Cadmium (Cd)	0.005	0.005 U	0.0040 U	0.0040 U	0.0040 U	
Arsenic (As)	0.005	0.005 U	0.0031	0.0030 U	0.0030 U	
Mercury (Hg) (7470A)	0.002	0.0005 U	0.0005 UJ	0.0005 UJ	0.0005 UJ	
Total Metals in mg/L						
Lead (Pb)	0.015	0.006	0.0920	0.1200	0.0650	0.0011 U
Chromium (Cr)	0.05	0.01 U	0.8700	1.4000	0.5900	0.011 U
Cadmium (Cd)	0.005	0.005 U	0.0044 U	0.0051	0.0044 U	0.0044 U
Arsenic (As)	0.005	0.005 U	0.0880	0.1000	0.0870	0.0081
Mercury (Hg) (7470A)	0.002	0.0005 U	0.00092	0.0013	0.00075	0.0005 U
PAHs in µg/L						
Naphthalene						0.1 U
1-Methylnaphthalene						0.1 U
2-Methylnaphthalene						0.1 U
Acenaphthylene						0.1 U
Acenaphthene						0.1 U
Fluorene						0.1 U
Phenanthrene						0.1 U
Anthracene						0.1 U
Fluoranthene						0.1 U
Pyrene						0.1 U
Benzo(a)anthracene						0.1 U
Chrysene						0.1 U
Benzo(b)fluoranthene						0.1 U
Benzo(k)fluoranthene						0.1 U
Benzo(a)pyrene	0.1					0.1 U
Indeno(1,2,3-cd)pyrene						0.1 U
Dibenzo(ah)anthracene						0.1 U
Benzo(ghi)perylene						0.1 U
Volatiles in µg/L						
MTBE	20	5.0 U	5 U	5 U	5 U	5 U
Chloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride(*)	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromomethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-Dichloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Hart Crowser

Table 6 - Historical Analytical Results for Groundwater Samples at 615 Dexter Property Sheet 2 of 2

Sample ID	MTCA	HC-1-TMW	DGW1-GW	DGW3-GW	DGW4-GW	DMW-1S-GW-21
Sampling Date	Method A	4/11/2019	3/6/2019	3/6/2019	3/4/2019	03/25/19
	Cleanup					
	Level					
Carbontetrachloride		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.5
1,2-Dichloroethane(EDC)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromomethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (EDB)*	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2-Tetrachloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	25	8.0	1.0 U	1.0 U	1.0 U
Xylenes	1000	11	14	1.0 U	1.0 U	1.0 U
Styrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene		37	2.6	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
n-Propylbenzene		51	3.7	1.0 U	1.0 U	1.0 U
2-Chlorotoluene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene		81	6.5	1.0 U	1.0 U	1.0 U
tert-Butylbenzene		1.1	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene		150	12	1.0 U	1.0 U	1.0 U
sec-Butylbenzene		12	1.2	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropyltoluene		19	1.7	1.0 U	1.0 U	1.5
1,4-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
n-Butylbenzene		12	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene		1.0 U	1.5	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-butadiene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

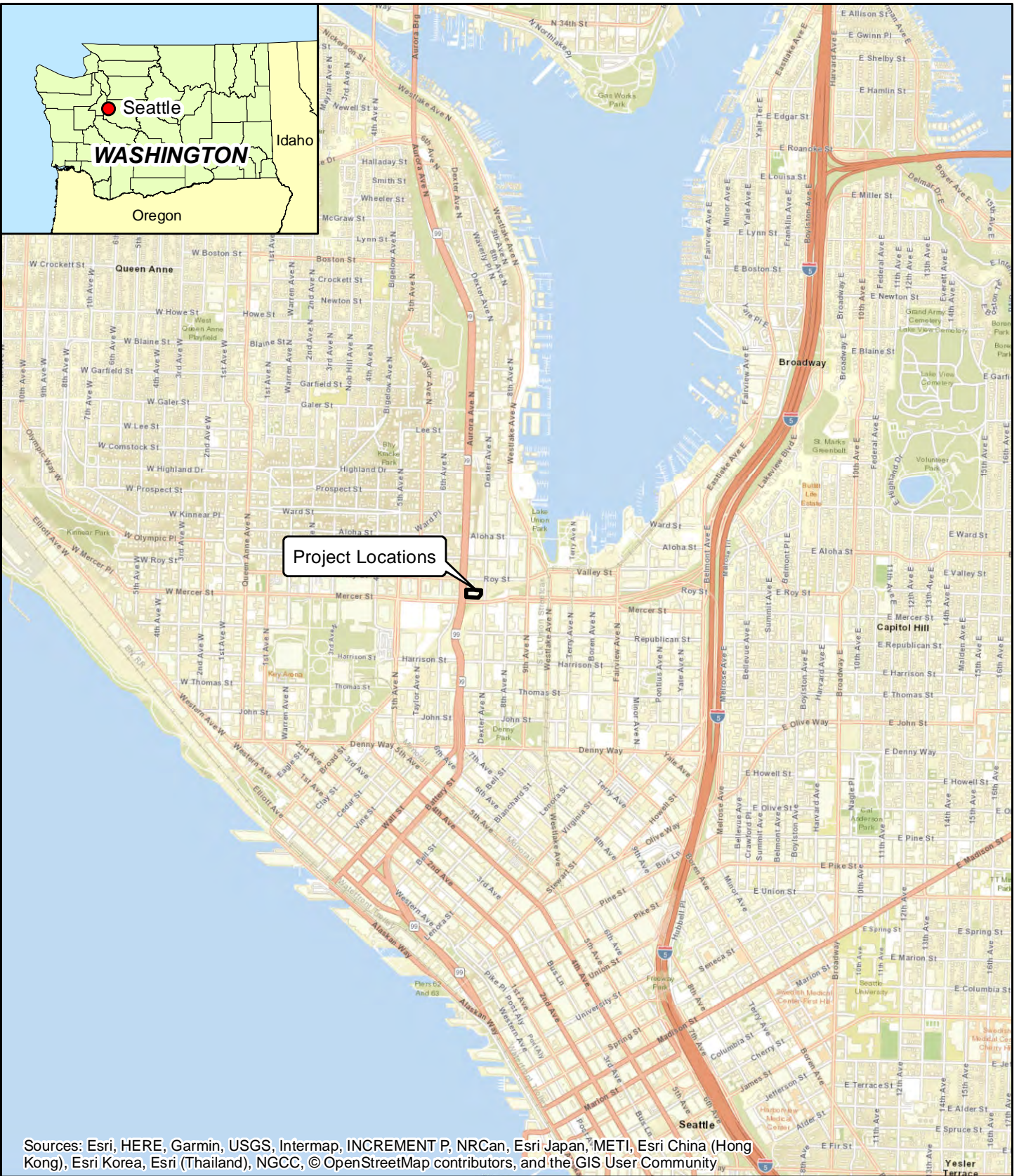
U = Not detected at reporting limit indicated.

J = Estimated value.

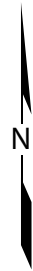
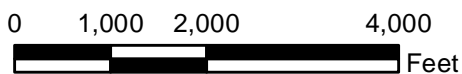
a. 0.8 mg/L when benzene is present in groundwater; 1.0 when benzene is not detected.

Detected concentrations are bolded.

Concentrations that exceed cleanup level are shaded.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



601 Dexter
Seattle, Washington

Vicinity Map

19449-01

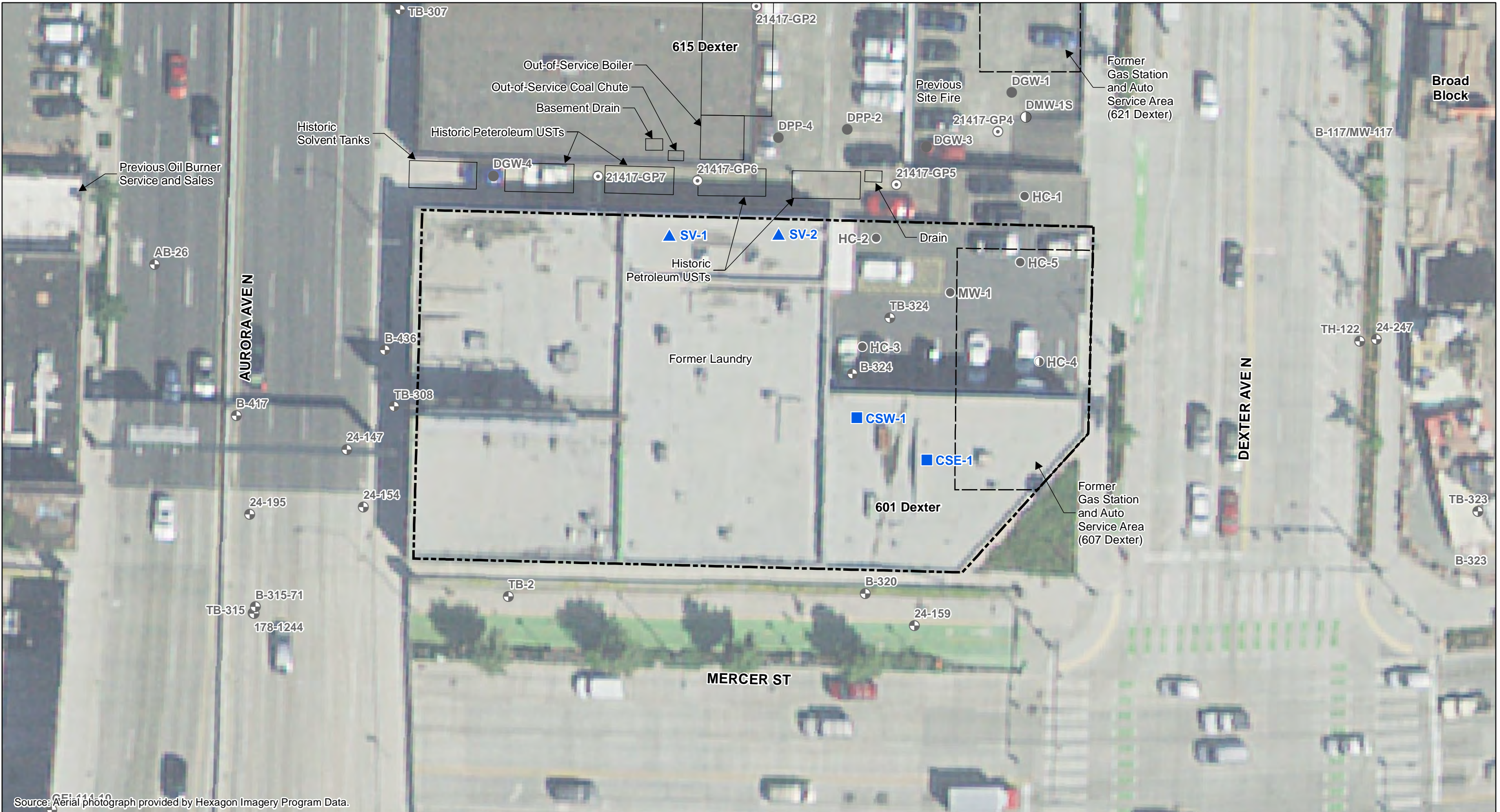
5/19



Figure

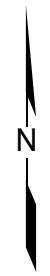
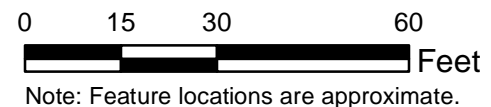
1

Document Path: L:\Notebooks\1944900_601_Dexter_Due_Diligence\GIS\GIS1944900-AD (SPlan_dex601).mxd Date: 5/22/2019 User Name: melissaschweitzer



Source: Aerial photograph provided by Hexagon Imagery Program Data.

<p>Legend</p> <p>Hart Crowser Exploration</p> <ul style="list-style-type: none"> ■ Crawl Space Air Quality Sample ▲ Subslab Vapor Sample ● Boring (Hart Crowser, 2019) ○ Monitoring Well (Hart Crowser, 2019) 		<p>Historical Explorations</p> <ul style="list-style-type: none"> ○ Boring (Shannon & Wilson, 2018) ⊕ Previous Geotechnical Borings 	<p> Site Boundary</p>	<p>601 Dexter Property Seattle, Washington</p>	
				<p>Site Plan</p>	
				<p>19449-00</p>	<p>5/19</p>
					<p>Figure 2</p>



APPENDIX A

Field Exploration Methods and Boring Logs

APPENDIX A

Field Exploration Methods and Boring Logs

This appendix describes the field exploration methods we used to advance explorations, collect soil and groundwater samples, collect sub-slab vapor and indoor air samples, and field screen the soil for visible impacts and headspace vapor. The exploration logs in this appendix show our interpretation of the exploration sampling and testing data. The logs indicate the depth where the soils change. Note that the soil changes may be gradual and may vary in depth across the site. In the field, we classified the samples taken from the explorations according to the methods presented on Figure A-1 – Key to Exploration Logs. This figure also provides a legend explaining the symbols and abbreviations used in the logs.

Explorations and Their Locations

The exploration locations were located and marked in the field by a Hart Crowser field representative. We contracted with a private utility-locating contractor to search for potential utilities at the proposed boring locations. Subsurface explorations for this project include six hollow-stem auger borings. Figure 2 shows the approximate location of explorations. The ground surface elevations at these locations are referenced to the North American Vertical Datum of 1988 (NAVD88). The method used determines the accuracy of the location and elevation of the explorations.

Auger Borings

All borings (HC-1 through HC-5 and MW-1) were drilled with a 4.25-inch-inside-diameter hollow-stem auger using a truck-mounted drill rig subcontracted by Hart Crowser. Prior to advancing the auger, the upper 5 feet of soil in each boring was removed via air knifing to reduce the risk of encountering unknown utilities. A Hart Crowser geologist continuously observed the drilling. A detailed field log was prepared for the boring. Using the standard penetration test (SPT), we obtained samples at intervals of 2.5 feet, 5 feet, or 10 feet, depending on the depth of the boring. Samples were classified in general accordance with ASTM D2488. The auger borings were screened for potential soil contamination. Detailed logs for each probe are on Figures A-2 through A-7 at the end of this appendix.

Soil Screening and Analysis

Field screening results were used as a general guideline to identify potential chemical constituents in soil samples. Soil samples were field screened for evidence of impacts related to petroleum and/or volatile organic compounds (VOCs) using: (1) visual and olfactory observations, (2) sheen testing, and (3) headspace vapor screening using a MiniRAE photoionization detector (PID). Field screening results were site-specific. The effectiveness of field screening varies with temperature, moisture content, organic content, soil type, and age of constituents. Visual examination consists of inspecting the soil for stains indicative of impacts. Visual screening is generally more effective when impacts are related to heavy petroleum hydrocarbons, such as motor or hydraulic oil, or when hydrocarbon concentrations are high.

We tested for sheen by placing a small volume of soil in a pan of water and observing the water surface for signs of sheen. Sheens were classified as follows:

No sheen (NS)	No visible sheen on water surface.
Slight sheen (SS)	Light colorless film, spotty to globular; spread was irregular, not rapid, areas of no sheen remain, film dissipates rapidly.
Moderate sheen (MS)	Light to heavy film, may have some color or iridescence, globular to stringy, spread was irregular to flowing; few remaining areas of no sheen on water surface.
Heavy sheen (HS)	Heavy colorful film with iridescence; stringy, spread was rapid; sheen flows off the sample; most of the water surface might be covered with sheen.

Headspace vapor screening was used to indicate the presence of volatile organic vapors. It involved placing a 3- to 6-ounce soil sample in a pint-sized plastic sample bag. The plastic bag was shaken for several minutes to expose the soil sample to the air captured in the plastic bag headspace and volatilize any VOCs. The probe of the PID was inserted into the bag and the instrument measured the concentration of organic vapors in the bag headspace. The highest vapor reading was recorded for each sample. The PID measures concentrations in parts per million (ppm) and is calibrated to isobutylene. The PID is typically designed to quantify organic vapor concentrations in the range of 0 to 1,000 ppm. The presence (or absence) of a sheen or headspace vapors does not definitively determine whether petroleum hydrocarbons are present (or absent); positive results do indicate that further testing may be warranted. The results of field screening are on the exploration logs at the end of this appendix.

Monitoring Well Installation

A monitoring well was installed at HC-4 to assess groundwater quality and to provide water quality data for the site. Two-inch-diameter Schedule 40 PVC riser pipe and 2-inch-diameter 0.020-inch machine-slotted screen were used for the well casing and screen. The well screen and casing riser were lowered down through the hollow-stem auger. As the auger was withdrawn, silica sand was placed in the annular space from the base of the boring to approximately 1 to 2 feet above the top of the well screen.

The well seal was constructed by placing bentonite chips in the annular space on top of the filter sand to within 1 foot of ground surface. The remaining annular space was backfilled with concrete to complete the surface seal. The monitoring well was completed with a flush-mount monument set in concrete, allowing foot and vehicle traffic above the well. The monitoring well was installed in accordance with Washington State Department of Ecology regulations.

Well Development

The monitoring well was developed on April 12, 2019, after installation using a combination of surge block and purging methods and a submersible bailer pump with disposable tubing. A field representative from Hart Crowser conducted the well development and documented field parameters. Sediment thickness at the bottom of the well was measured and recorded before and after well development. Well development began by surging and bailing the first five casing volumes using a stainless steel bailer which also removed

sediment from the bottom of the wells. Development was completed by using a submersible bailer pump to remove a minimum of five additional casing volumes, for a total of ten casing volumes. Well development proceeded until water from the well became visibly clear.

Monitoring Well Groundwater Sampling

A groundwater sample was collected from HC-4 monitoring well on April 12, 2019 for chemical analysis after completion of well development.

Upon arrival at the wellhead, field personnel recorded well conditions, water, and sediment in the well using a Solinst or equivalent interface probe. A groundwater sample was collected using EPA's Low-flow Ground-water Sampling Procedures to minimize suspended solids in the samples and maximize the sample's representativeness of the aquifer. The well was purged and sampled with a peristaltic pump. Clean sample tubing was used for the well and disposed of after use.

Grab Groundwater Sampling

A grab groundwater sample was collected at HC-1 (Figure 2) on April 3, 2019. A temporary mini-well was installed by lowering a stainless-steel screen section and tubing to a depth of 25-30 feet below ground surface (bgs). A sample was obtained using a peristaltic pump and the low-flow groundwater sampling techniques. The grab groundwater sample was collected directly from the polyethylene tubing and placed in pre-cleaned, laboratory supplied containers. The containers were sealed and labeled. Filled sample containers were stored in a cooler containing bagged ice prior to submittal to the chemistry laboratory under chain of custody protocols.

Sample Handling and Laboratory Analysis

Soil and groundwater samples collected during the Phase II sampling event were returned to Hart Crowser for review prior to submission to OnSite Environmental Inc. (OnSite) of Redmond, Washington, or Advanced Analytical Laboratory (AAL) of Redmond, Washington, for chemical analysis. Samples were delivered to the laboratories under chain of custody protocols.

Investigation-Derived Waste Storage and Disposal

Soil cuttings and purge water generated during exploration activities and groundwater sampling were placed into separate labeled drums and stored on the adjacent site with other IDW containers pending laboratory results and arrangements for appropriate disposal.

Sample Description

Identification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. ASTM D 2488 visual-manual identification methods were used as a guide. Where laboratory testing confirmed visual-manual identifications, then ASTM D 2487 was used to classify the soils.

Relative Density/Consistency

Soil density/consistency in borings is related primarily to the standard penetration resistance (N). Soil density/consistency in test pits and probes is estimated based on visual observation and is presented parenthetically on the logs.

SAND or GRAVEL Relative Density	N (Blows/Foot)	SILT or CLAY Consistency	N (Blows/Foot)
Very loose	0 to 4	Very soft	0 to 1
Loose	5 to 10	Soft	2 to 4
Medium dense	11 to 30	Medium stiff	5 to 8
Dense	31 to 50	Stiff	9 to 15
Very dense	>50	Very stiff	16 to 30
		Hard	>30

Moisture

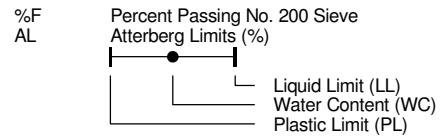
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

Minor Constituents

Estimated Percentage

Sand, Gravel	
Trace	<5
Few	5 - 15
Cobbles, Boulders	
Trace	<5
Few	5 - 10
Little	15 - 25
Some	30 - 45

Soil Test Symbols



CA	Chemical Analysis
CAUC	Consolidated Anisotropic Undrained Compression
CAUE	Consolidated Anisotropic Undrained Extension
CBR	California Bearing Ratio
CIDC	Consolidated Drained Isotropic Triaxial Compression
CIUC	Consolidated Isotropic Undrained Compression
CK0DC	Consolidated k0 Undrained Triaxial Compression
CK0DSS	Consolidated k0 Undrained Direct Simple Shear
CK0UC	Consolidated k0 Undrained Compression
CK0UE	Consolidated k0 Undrained Extension
CRSCN	Constant Rate of Strain Consolidation
DSS	Direct Simple Shear
DT	In Situ Density
GS	Grain Size Classification
HYD	Hydrometer
ILCN	Incremental Load Consolidation
K0CN	k0 Consolidation
kc	Constant Head Permeability
kf	Falling Head Permeability
MD	Moisture Density Relationship
OC	Organic Content
OT	Tests by Others
P	Pressuremeter
PID	Photionization Detector Reading
PP	Pocket Penetrometer
SG	Specific Gravity
TRS	Torsional Ring Shear
TV	Torvane
UC	Unconfined Compression
UUC	Unconsolidated Undrained Triaxial Compression
VS	Vane Shear
WC	Water Content (%)

USCS Soil Classification Chart (ASTM D 2487)

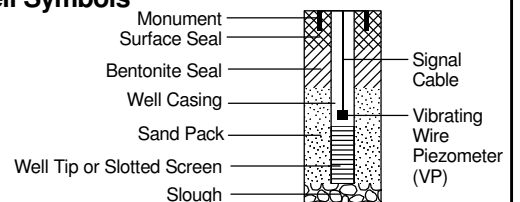
Major Divisions		Symbols		Typical Descriptions
		Graph	USCS	
Coarse Grained Soils More than 50% of Material Retained on No. 200 Sieve	Gravel and Gravelly Soils More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels (<5% fines)	GW	Well-Graded Gravel; Well-Graded Gravel with Sand
		Gravels (5-12% fines)	GP	Poorly Graded Gravel; Poorly Graded Gravel with Sand
			GW-GM	Well-Graded Gravel with Silt; Well-Graded Gravel with Silt and Sand
		Gravels with Fines (>12% fines)	GW-GC	Well-Graded Gravel with Clay; Well-Graded Gravel with Clay and Sand
			GP-GM	Poorly Graded Gravel with Silt; Poorly Graded Gravel with Silt and Sand
		Sand and Sandy Soils More than 50% of Coarse Fraction Passing No. 4 Sieve	Sands with few Fines (<5% fines)	GP-GC
	GM			Silty Gravel; Silty Gravel with Sand
	Sands (5-12% fines)		GC	Clayey Gravel; Clayey Gravel with Sand
			SW	Well-Graded Sand; Well-Graded Sand with Gravel
	Fine Grained Soils More than 50% of Material Passing No. 200 Sieve	Sands with Fines (>12% fines)	SP	Poorly Graded Sand; Poorly Graded Sand with Gravel
SW-SM			Well-Graded Sand with Silt Well-Graded Sand with Silt and Gravel	
SW-SC			Well-Graded Sand with Clay; Well-Graded Sand with Clay and Gravel	
Silt		SP-SM	Poorly Graded Sand with Silt; Poorly Graded Sand with Silt and Gravel	
		SP-SC	Poorly Graded Sand with Clay; Poorly Graded Sand with Clay and Gravel	
Silty Clay (based on Atterberg Limits)		SM	Silty Sand; Silty Sand with Gravel	
Clays	SC	Clayey Sand; Clayey Sand with Gravel		
	ML	Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt		
	MH	Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt		
Organics	CL-ML	Silty Clay; Silty Clay with Sand or Gravel; Gravelly or Sandy Silty Clay		
	CL	Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay		
	CH	Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay		
Highly Organic (>50% organic material)	OL/OH	Organic Soil; Organic Soil with Sand or Gravel; Sandy or Gravelly Organic Soil		
	PT	Peat - Decomposing Vegetation - Fibrous to Amorphous Texture		

Groundwater Indicators

	Groundwater Level on Date or At Time of Drilling (ATD)
	Groundwater Level on Date Measured in Piezometer
	Groundwater Seepage (Test Pits)

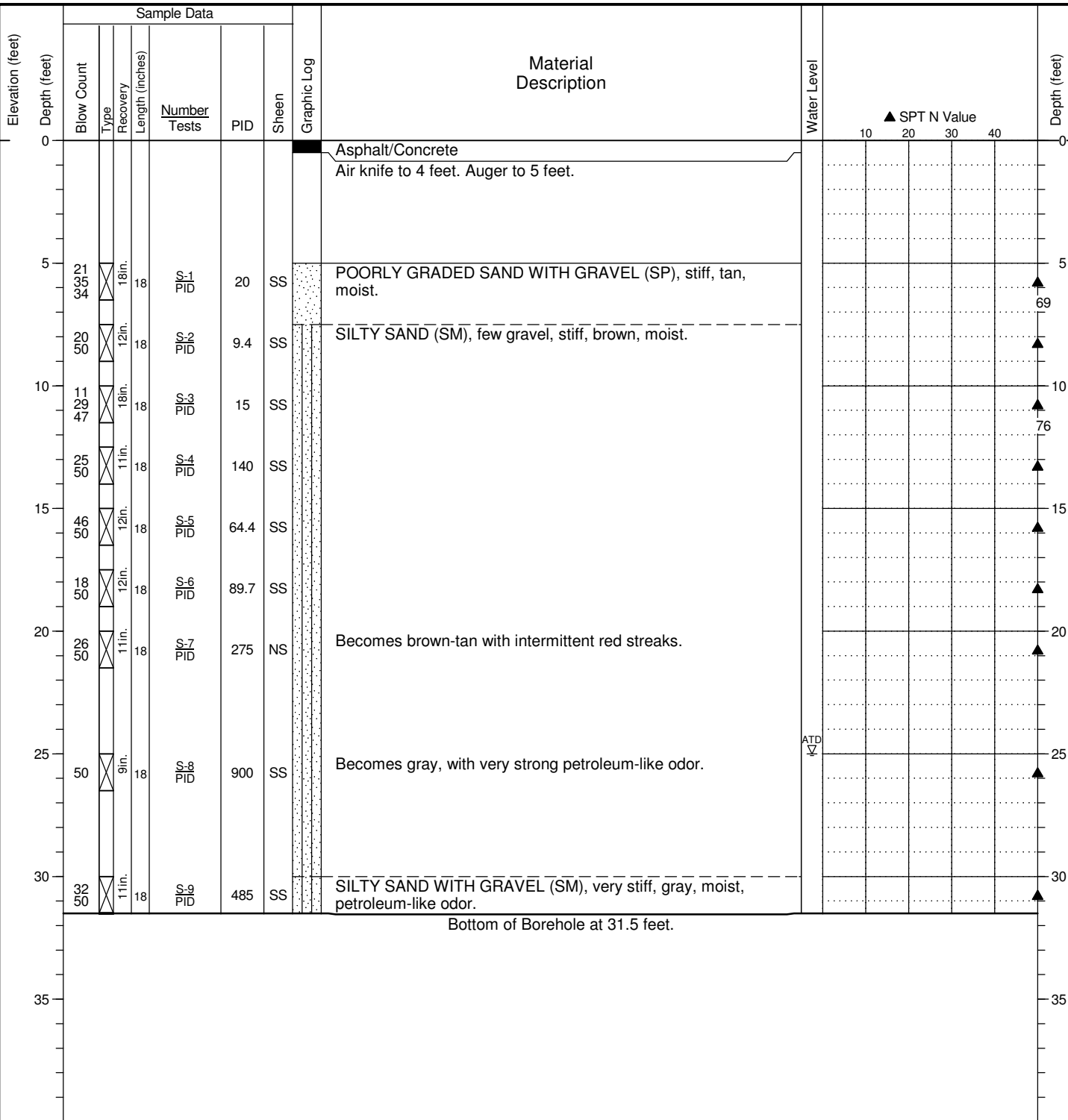
Sample Symbols

Well Symbols



KEY TO EXP. LOGS (SOIL ONLY) - J:\GINTI\HC_LIBRARY\GLB - 4/24/19 13:06 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINTI FILES\1944900-BL.GPJ - kzi

Date Started: 4/3/19 Date Completed: 4/3/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter: NA
 Total Depth: 31.5 feet Depth to Groundwater: 25 feet



HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kz

General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

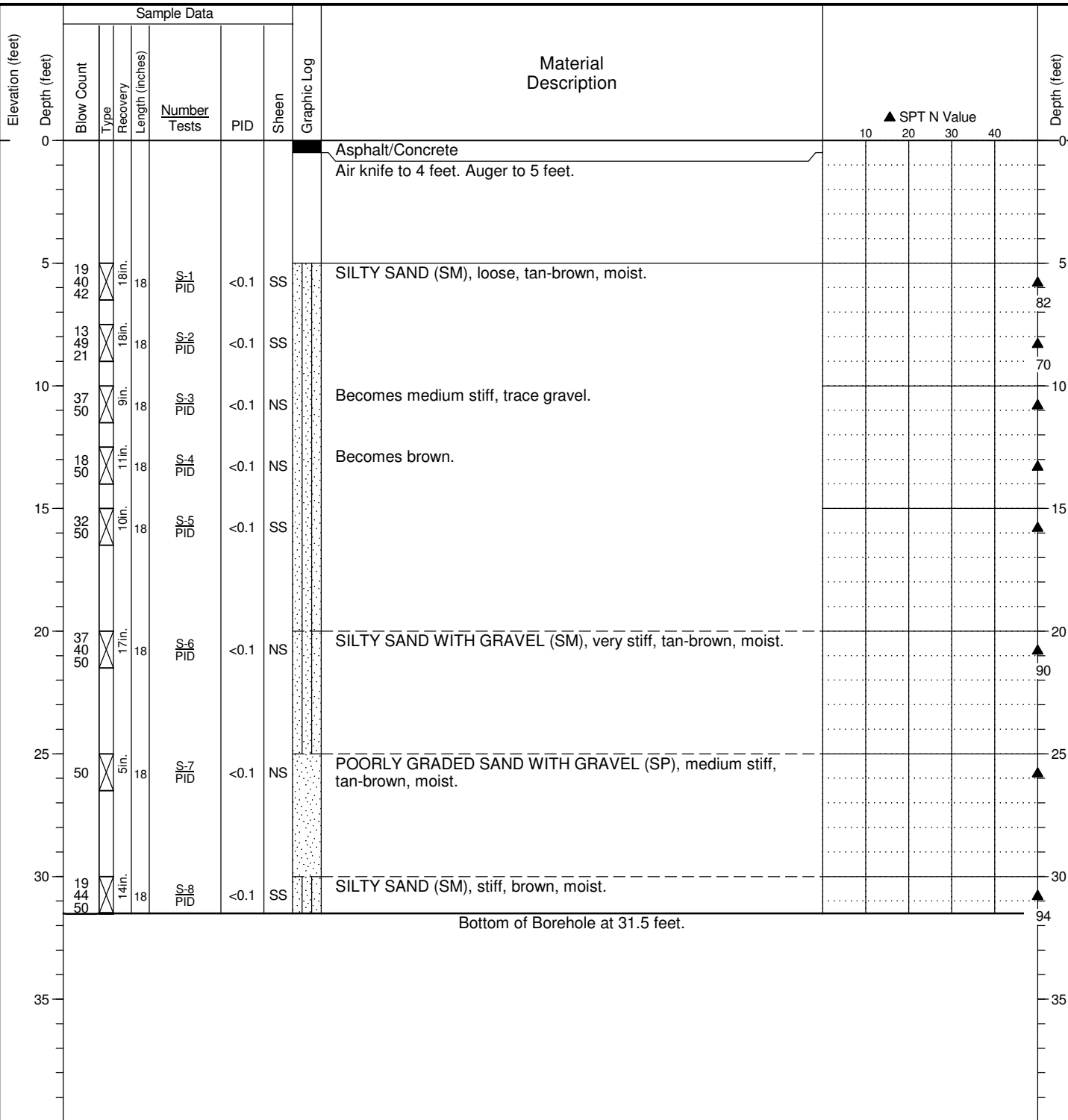
Date Started: 4/3/19 Date Completed: 4/3/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter: NA
 Total Depth: 16.5 feet Depth to Groundwater: Not Identified

Elevation (feet)	Depth (feet)	Sample Data					Graphic Log	Material Description	▲ SPT N Value				Depth (feet)
		Blow Count	Type	Recovery Length (inches)	Number Tests	PID			Sheen	10	20	30	
0								Asphalt/Concrete Air knife to 2.5 feet.					0
21 32 33		18in.	18	S-1 PID	<0.1	SS		POORLY GRADED SAND WITH GRAVEL (SP), medium stiff, gray, moist.					65
16 43 50		18in.	18	S-2 PID	<0.1	SS		Becomes very stiff.					93
22 50		11in.	18	S-3 PID	<0.1	NS		Becomes medium stiff, tan-gray.					
33 50		10in.	18	S-4 PID	<0.1	SS							10
26 44 50		16in.	18	S-5		SS		SILTY SAND WITH GRAVEL (SM), medium stiff to very stiff, gray, moist.					94
25 50		10in.	18	S-6		NS							15
Bottom of Borehole at 16.5 feet.													

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

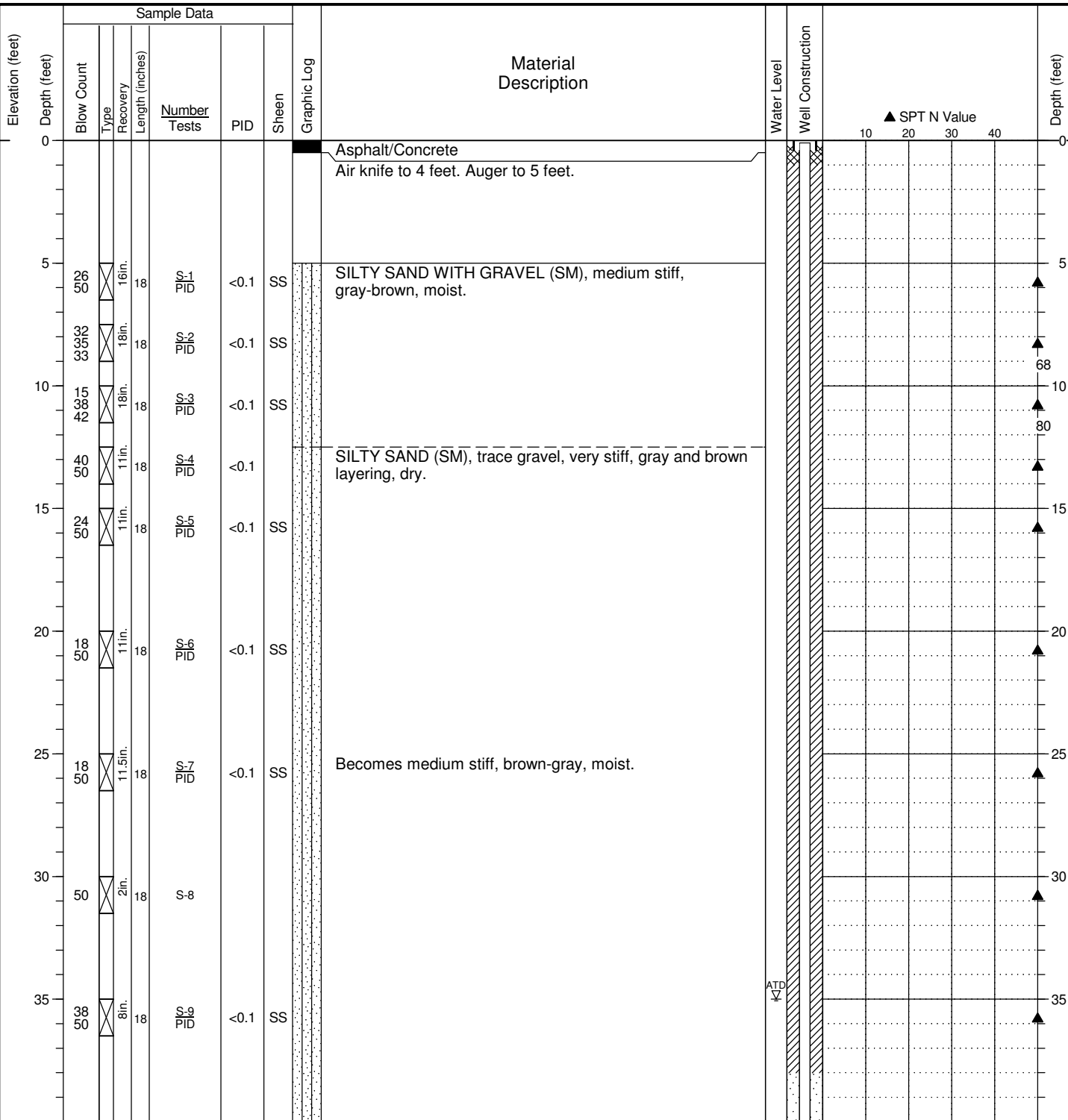
Date Started: 4/4/19 Date Completed: 4/4/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter: NA
 Total Depth: 31.5 feet Depth to Groundwater: Not Identified



General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

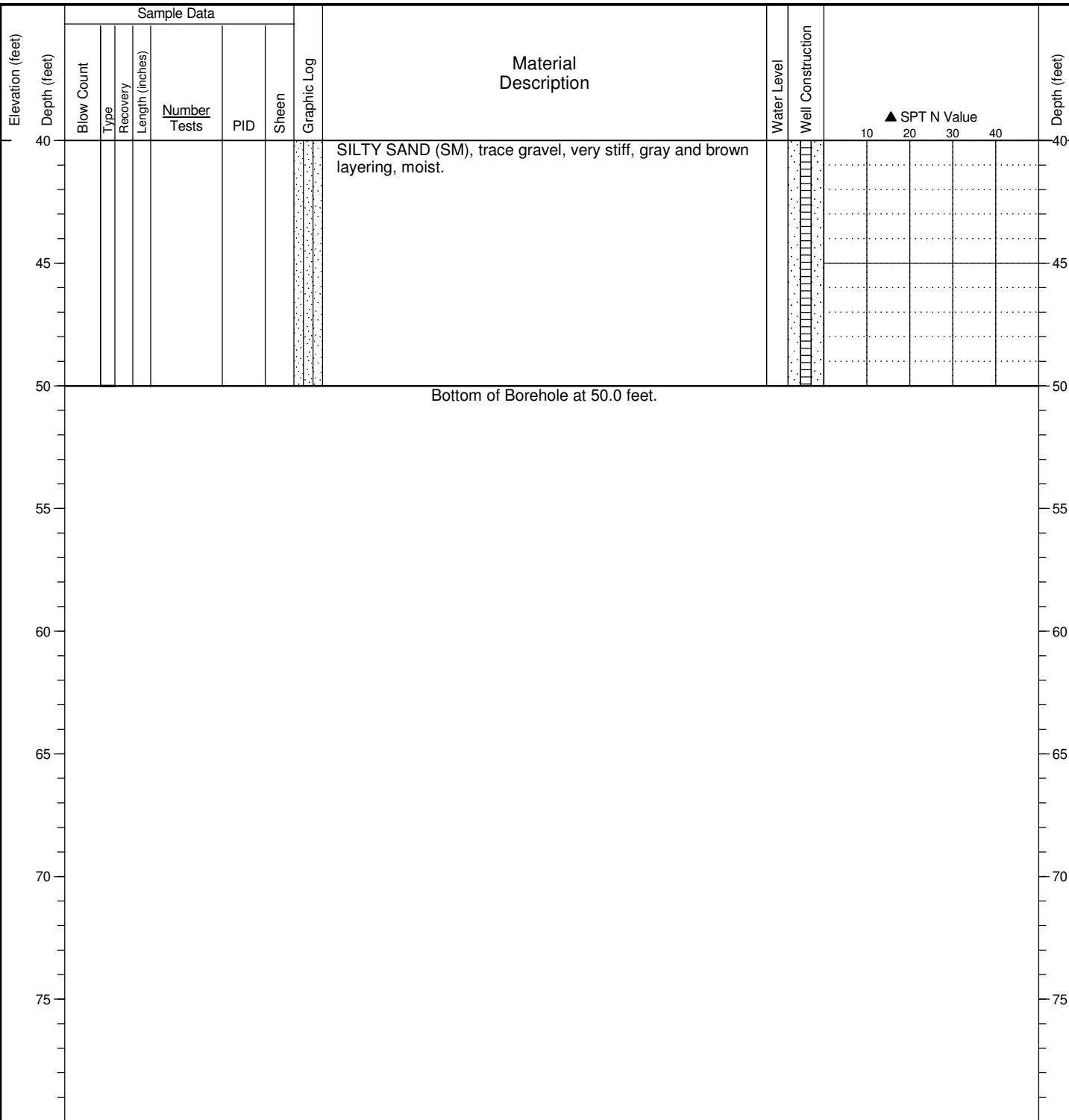
Date Started: 4/4/19 Date Completed: 4/4/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Well Tag ID: BLR-695 Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter:
 Total Depth: 50 feet Depth to Groundwater: 35 feet



General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

Date Started: 4/4/19 Date Completed: 4/4/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Well Tag ID: BLR-695 Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter:
 Total Depth: 50 feet Depth to Groundwater: 35 feet



General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

Date Started: 4/3/19 Date Completed: 4/3/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter: NA
 Total Depth: 16.5 feet Depth to Groundwater: Not Identified

Elevation (feet)	Depth (feet)	Sample Data					Graphic Log	Material Description	▲ SPT N Value				Depth (feet)	
		Blow Count	Type	Recovery Length (inches)	Number Tests	PID			Sheen	10	20	30		40
0	0							Asphalt/Concrete Air knife to 4 feet. Auger to 5 feet.					0	
	5	20 40 50	X	17in.	18	S-1 PID	<0.1	SS	SILTY SAND WITH GRAVEL (SM), dense, tan-brown, moist.					5
	10	19 50	X	10in.	18	S-2 PID	<0.1	SS	Becomes very dense, gray.					10
	15	27 50	X	11.5in.	18	S-3 PID	<0.1	SS	Becomes dense, tan.					15
	20	33 50	X	11in.	18	S-4 PID	<0.1	NS	SILTY SAND (SM), few gravels, medium stiff, tan-gray, moist.					20
	25	34 50	X	12in.	18	S-5 PID	<0.1	SS	SILTY SAND WITH GRAVEL (SM), medium stiff, tan, moist.					25
Bottom of Borehole at 16.5 feet.														

General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

Date Started: 4/4/19 Date Completed: 4/4/19 Drilling Contractor/Crew: Holt Services, Inc. / Rayon
 Logged by: M. Fong Checked by: B. Dozier Drilling Method: Hollow Stem Auger
 Location: Rig Model/Type:
 Ground Surface Elevation: Hammer Type: Auto-hammer
 Horizontal Datum: Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
 Vertical Datum: Measured Hammer Efficiency (%): NA
 Comments: Location and ground surface elevations are approximate. Hole Diameter: 4.25 inches Casing Diameter: NA
 Total Depth: 31.5 feet Depth to Groundwater: Not Identified

Elevation (feet)	Depth (feet)	Sample Data					Graphic Log	Material Description	▲ SPT N Value				Depth (feet)
		Blow Count	Type	Recovery Length (inches)	Number Tests	PID			Sheen	10	20	30	
0	0							Asphalt/Concrete Air knife to 4 feet. Auger to 5 feet.					0
	5	19 50	X	9in.	S-1 PID	<.1	SS	SILTY SAND (SM), few gravel, medium stiff, brown, moist. Becomes gray-brown.					5
	10	31 50	X	11in.	S-2 PID	<.1	SS						10
	15	20 50	X	10in.	S-3 PID	<.1	SS						15
	20	50	X	6in.	S-4 PID	<.1	SS						20
	25	24 50	X	11in.	S-5 PID	<.1	SS	SILTY SAND WITH GRAVEL (SM), medium stiff, brown, moist.					25
	30	48 50	X	8in.	S-6 PID	<.1	SS						30
	31.5	18 50	X	11in.	S-7 PID	<.1	SS	SILTY SAND (SM), few gravel, medium stiff, gray, moist. Bottom of Borehole at 31.5 feet.					31.5
	35	50	X	5in.	S-8 PID	<.1	SS						35

HC BORING LOG - J:\GINT\HC LIBRARY.GLB - 5/10/19 13:50 - L:\NOTEBOOKS\1944900_601_DEXTER_DUE_DILEGENCE\FIELD DATA\PERM_GINT FILES\1944900-BL.GPJ - kzi

General Notes:
 1. Refer to Figure A-1 for explanation of descriptions and symbols.
 2. Material descriptions and stratum lines are interpretive and actual changes may be gradual. Solid stratum lines indicate distinct contact between material strata or geologic units. Dashed stratum lines indicate gradual or approximate change between material strata or geologic units.
 3. USCS designations are based on visual-manual identification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
 4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.

APPENDIX B
Chemical Data Quality Review and Laboratory Reports

APPENDIX B

Chemical Data Quality Review and Laboratory Reports

Chemical Data Quality Review

On April 3 and 4, 2019, 44 soil samples and one groundwater sample were collected and submitted to Advanced Analytical Laboratory (AAL) of Redmond, Washington for analysis. Results were reported as AAL Job Number C90411-3. On April 12, 2019, one groundwater sample was collected and submitted to AAL of Redmond, Washington for analysis. Results were reported as AAL Job Number C90412-3. On April 9 and 10, 2019, two soil vapor and two indoor air samples were collected and submitted to Fremont Analytical, Inc. (Fremont) of Seattle, Washington for analysis. Results were reported as Fremont Work Order Number 1904223.

Selected soil samples were analyzed for one or more of:

- Diesel- and heavy-oil-range total petroleum hydrocarbons (TPH) by Washington State Department of Ecology (Ecology) Method NWTPH-Dx;
- Gasoline-range TPH by Ecology Method NWTPH-Gx;
- Volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260B;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B;
- Total metals (arsenic, cadmium, chromium, and lead) by EPA Method 7010;
- Total mercury by EPA Method 7471;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270 SIM;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082;
- Percent moisture by Standard Method (SM) 2540B.

Selected groundwater samples were analyzed for one or more of:

- VOCs by EPA Method 8260B;
- Diesel- and heavy-oil-range TPH by Ecology Method NWPTH-Dx;
- Gasoline-range TPH by Ecology Method NWTPH-Gx;
- Total and dissolved metals (lead, chromium, cadmium, and arsenic) by EPA Method 7010;
- Total and dissolved mercury by EPA Method 7470A;
- PAHs by EPA Method 8270; and
- Total suspended solids (TSS) by EPA Method 160.2.

Selected air samples (soil vapor and indoor air) were analyzed for one or more of:

- Petroleum fractionation by EPA Method TO-15;
- Helium by GC/TCD;
- Major gases (carbon dioxide, methane, and oxygen) by EPA Method 3C; and
- VOCs by EPA Method TO-15.

The laboratories performed ongoing quality assurance/quality control (QA/QC) reviews. Hart Crowser reviewed summary reports to check that they met data quality objectives for the project.

The following criteria were evaluated during the standard data quality review process:

- Holding times;
- Reporting limits (RLs);
- Method blanks;
- Laboratory control sample (LCS) recoveries;
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries;
- Laboratory duplicate relative percent difference (RPD); and
- Surrogate recoveries.

Most of the data were acceptable for use without qualification. The complete laboratory reports are at the end of this attachment. The data review is summarized below.

Sample Receiving Notes

No sample receiving discrepancies were noted by the laboratory. Discrepancies from the chains of custody (COCs) are:

C90411-3. Nineteen samples were placed on hold and not analyzed by the laboratory. The laboratory report contained two copies of the COC, one with a signature in the “Received by” section and one without. Sample results were not affected and no results were qualified.

1904223. The laboratory report contained two copies of the COC, one with additional analyses requested. Sample results were not affected and no results were qualified.

Soil Results

Diesel- and Heavy-Oil-Range TPH by NWTPH-Dx

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within laboratory control limits. The laboratory duplicate RPDs were not applicable as the sample and duplicate results were below the reporting limits. The method states that there should be one duplicate analyzed per ten or fewer samples. Sixteen samples were analyzed, but only one duplicate was analyzed. Analytical results were not affected, and no samples were qualified.

The data are acceptable for use without qualification.

Gasoline-Range TPH by NWTPH-Gx

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within laboratory control limits. The laboratory duplicate RPDs were not applicable as the sample and duplicate results were below the reporting limits. The method states that there should be one duplicate analyzed per ten or fewer samples. Fifteen samples were analyzed, but only one duplicate was analyzed. Analytical results were not affected, and no samples were qualified.

The data are acceptable for use without qualification.

VOCs by EPA Method 8260B

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

BTEX by EPA Method 8021B

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

Total Metals (As, Cd, Cr, and Pb) by EPA Method 7010

Holding times and reporting limits were acceptable. No method blank contamination was detected. The laboratory duplicate RPDs either were within method control limits or were not applicable because the sample and duplicate results were below the reporting limits.

LCS recoveries were within method control limits with the following exception:

- **LCS 4/22/19.** The LCS recovery for the lead analysis fell below the method control limit, but was within the laboratory control limit. The result for lead in sample HC-1-25 was qualified as estimated (J).

MS recoveries were within method control limits with the following exceptions:

- **MS HC-3-12.5.** The MS recoveries for the lead and chromium analyses were not reported, and were flagged as M by the laboratory due to matrix interference. The results for lead and chromium in sample HC-3-12.5 were qualified as estimated (J).

The data are acceptable for use with qualification.

Total Metals (Hg) by EPA Method 7471

Holding times and reporting limits were acceptable. No method blank contamination was detected. LCS and MS recoveries were within method control limits. The laboratory duplicate RPDs were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

PAHs by EPA Method 8270 SIM

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

PCBs by EPA Method 8082

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

Percent Moisture by SM 2540B

Holding times and reporting limits were acceptable.

The data are acceptable for use without qualification.

Groundwater Results

VOCs by EPA Method 8260B

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

Diesel- and Heavy-Oil-Range TPH by NWTPH-Dx

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within laboratory control limits. The laboratory duplicate RPDs were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

Gasoline-Range TPH by NWTPH-Gx

Holding times and reporting limits were acceptable. No method blank contamination was detected. The laboratory duplicate RPDs either were within laboratory control limits or were not applicable because the sample and duplicate results were below the reporting limits.

Surrogate recoveries were within laboratory control limits with the following exception:

- **Samples HC-1-TMW and HC-1-TMW Laboratory Duplicate.** One of two surrogate recoveries were not reported, and were flagged as C by the laboratory due to coelution with sample peaks. A high concentration of gasoline was present in the samples, and sample results were not qualified.

The data are acceptable for use without qualification.

Total and Dissolved Metals (As, Cd, Cr, and Pb) by EPA Method 7010

Holding times and reporting limits were acceptable. No method blank contamination was detected. LCS and MS recoveries were within method control limits. The laboratory duplicate RPDs either were within method control limits or were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

Total and Dissolved Metals (Hg) by EPA Method 7470A

Holding times and reporting limits were acceptable. No method blank contamination was detected. LCS and MS recoveries were within method control limits. The laboratory duplicate RPDs were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

PAHs by EPA Method 8270

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

TSS by EPA Method 160.2

Reporting limits were acceptable.

Holding times were acceptable with the following exceptions:

- **Sample HC-1-TMW.** The method recommended holding time was exceeded. The result for TSS in sample HC-1-TMW was qualified as estimated (J).

The data are acceptable for use with qualification.

Air Results

Petroleum Fractionation by EPA Method TO-15

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate and LCS recoveries were within laboratory control limits. The laboratory duplicate RPDs either were within laboratory control limits or were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

Helium by GC/TCD

Holding times and reporting limits were acceptable. No method blank contamination was detected. LCS recoveries were within laboratory control limits. The laboratory duplicate RPDs were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

Major Gases (Carbon Dioxide, Methane, and Oxygen) by EPA Method 3C

Holding times and reporting limits were acceptable. LCS recoveries were within laboratory control limits. The laboratory duplicate RPDs either were within laboratory control limits or were not applicable because the sample and duplicate results were below the reporting limits.

The data are acceptable for use without qualification.

VOCs by EPA Method TO-15

Holding times and reporting limits were acceptable. Surrogate recoveries were within laboratory control limits.

LCS and LCSD recoveries and associated RPDs were within laboratory control limits with the following exceptions:

- **LCS/LCSD 4/16/19.** The LCS and LCSD recoveries for the 1,2,4-trichlorobenzene, 2-hexanone, 1,4-dioxane, and methylene chloride analyses fell below laboratory control limits. The results for 1,2,4-trichlorobenzene, 2-hexanone, 1,4-dioxane, and methylene chloride in samples CSE-1, CSW-1, SV-1, and SV-2 were qualified as estimated (J).

No method blank contamination was detected with the following exception:

- **Method Blank 4/16/19.** Benzene was detected in the method blank. Samples CSE-1 and CSW-1 had benzene concentrations less than 5 times the concentration of benzene in the method blank. The results for benzene in samples CSE-1 and CSW-1 were qualified as non-detect (U). Samples SV-1 and SV-2 had benzene concentrations greater than 5 times the concentration of benzene in the method blank, and these sample results were not qualified.

The data are acceptable for use with qualification.

LABORATORY REPORTS

April 19, 2019

*Julie Wukelic
Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, WA 98121*

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *601 Dexter 19449-00 (C90412-3)* Project.

Samples were received on *April 12, 2019*. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 702-8571.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Val G. Ivanov, Ph.D.
Laboratory Manager

4078 148 Ave NE ■ Redmond, WA 98052

425.702-8571

E-mail: aachemlab@yahoo.com

Sample Custody Record C90412-3

Samples Shipped to: AAAL



Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

JOB <u>1944900</u> LAB NUMBER _____ PROJECT NAME <u>601 Dexter</u> HART CROWSER CONTACT <u>Julie Wukelic</u> SAMPLED BY: <u>Matthew Fong</u>						REQUESTED ANALYSIS NwTPH-Gra NwTPH-Dra PAHs VOCs Total MICA metals-5										NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS				
LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX																
	HC-4		4/12/19	13:30	Water	X	X	X	X	X											
RELINQUISHED BY		DATE	RECEIVED BY		DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:										TOTAL NUMBER OF CONTAINERS					
SIGNATURE <u>VATSU</u>		TIME 16:10	SIGNATURE <u>VATSU</u>		TIME 16:10											SAMPLE RECEIPT INFORMATION					
PRINT NAME <u>VATSU</u>			PRINT NAME <u>VATSU</u>			CUSTODY SEALS:															
COMPANY			COMPANY			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A GOOD CONDITION <input type="checkbox"/> YES <input type="checkbox"/> NO TEMPERATURE _____ SHIPMENT METHOD: <input type="checkbox"/> HAND <input type="checkbox"/> COURIER <input type="checkbox"/> OVERNIGHT															
RELINQUISHED BY		DATE	RECEIVED BY		DATE	COOLER NO.:		STORAGE LOCATION:		TURNAROUND TIME:											
SIGNATURE		TIME	SIGNATURE		TIME	See Lab Work Order No. _____		<input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____													
PRINT NAME			PRINT NAME			for Other Contract Requirements															
COMPANY			COMPANY																		

White to Lab Yellow to Project Manager Pink to Sample Custodian

AAL Job Number: C90412-3
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: 601 Dexter
Client Project Number: 19449-00
Date received: 04/12/19

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results		MS MSD RPD					
8260B, µg/L		MTH BLK	LCS	HC-4	HC-4	HC-4	HC-4
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19
MTBE	5.0	nd		nd			
Chloromethane	1.0	nd		nd			
Vinyl chloride(*)	0.2	nd		nd			
Bromomethane	1.0	nd		nd			
Chloroethane	1.0	nd		nd			
Trichlorofluoromethane	1.0	nd		nd			
1,1-Dichloroethene	1.0	nd		nd			
Methylene chloride	1.0	nd		nd			
trans-1,2-Dichloroethene	1.0	nd		nd			
1,1-Dichloroethane	1.0	nd		nd			
2,2-Dichloropropane	1.0	nd		nd			
cis-1,2-Dichloroethene	1.0	nd		nd			
Chloroform	1.0	nd		nd			
1,1,1-Trichloroethane	1.0	nd		nd			
Carbontetrachloride	1.0	nd		nd			
1,1-Dichloropropene	1.0	nd		nd			
Benzene	1.0	nd	84%	nd	87%	93%	7%
1,2-Dichloroethane(EDC)	1.0	nd		nd			
Trichloroethene	1.0	nd	79%	nd	86%	88%	3%
1,2-Dichloropropane	1.0	nd		nd			
Dibromomethane	1.0	nd		nd			
Bromodichloromethane	1.0	nd		nd			
cis-1,3-Dichloropropene	1.0	nd		nd			
Toluene	1.0	nd	89%	nd	89%	98%	9%
trans-1,3-Dichloropropene	1.0	nd		nd			
1,1,2-Trichloroethane	1.0	nd		nd			
Tetrachloroethene	1.0	nd		nd			
1,3-Dichloropropane	1.0	nd		nd			
Dibromochloromethane	1.0	nd		nd			
1,2-Dibromoethane (EDB)*	0.01	nd		nd			
Chlorobenzene	1.0	nd	97%	nd	95%	106%	11%
1,1,1,2-Tetrachloroethane	1.0	nd		nd			
Ethylbenzene	1.0	nd		nd			
Xylenes	1.0	nd		nd			
Styrene	1.0	nd		nd			
Bromoform	1.0	nd		nd			
Isopropylbenzene	1.0	nd		nd			
1,2,3-Trichloropropane	1.0	nd		nd			
Bromobenzene	1.0	nd		nd			
1,1,2,2-Tetrachloroethane	1.0	nd		nd			
n-Propylbenzene	1.0	nd		nd			
2-Chlorotoluene	1.0	nd		nd			
4-Chlorotoluene	1.0	nd		nd			
1,3,5-Trimethylbenzene	1.0	nd		nd			
tert-Butylbenzene	1.0	nd		nd			
1,2,4-Trimethylbenzene	1.0	nd		nd			
sec-Butylbenzene	1.0	nd		nd			
1,3-Dichlorobenzene	1.0	nd		nd			

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results				MS	MSD	RPD
8260B, µg/L	MTH BLK	LCS	HC-4	HC-4	HC-4	HC-4
Matrix	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19
Isopropyltoluene	1.0	nd		nd		
1,4-Dichlorobenzene	1.0	nd		nd		
1,2-Dichlorobenzene	1.0	nd		nd		
n-Butylbenzene	1.0	nd		nd		
1,2-Dibromo-3-Chloropropane	1.0	nd		nd		
1,2,4-Trichlorobenzene	1.0	nd		nd		
Hexachloro-1,3-butadiene	1.0	nd		nd		
Naphthalene	1.0	nd		nd		
1,2,3-Trichlorobenzene	1.0	nd		nd		

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	95%	89%	92%	96%	91%
Toluene-d8	104%	86%	93%	93%	87%
1,2-Dichloroethane-d4	95%	98%	97%	98%	95%
4-Bromofluorobenzene	101%	96%	108%	99%	97%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results		Dupl		
NWTPH-Dx, mg/L		MTH BLK	HC-4	HC-4
Matrix	Water	Water	Water	Water
Date extracted	Reporting	04/13/19	04/13/19	04/13/19
Date analyzed	Limits	04/13/19	04/13/19	04/13/19
Kerosene/Jet fuel	0.20	nd	nd	nd
Diesel/Fuel oil	0.20	nd	nd	nd
Heavy oil	0.50	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	115%	113%	130%
o-Terphenyl	102%	117%	128%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results		Dupl		
NWTPH-Gx		MTH BLK	HC-4	HC-4
Matrix	Water	Water	Water	Water
Date analyzed	Reporting Limits	04/15/19	04/15/19	04/15/19

<u>NWTPH-Gx, mg/L</u>				
Mineral spirits/Stoddard	0.10	nd	nd	nd
Gasoline	0.10	nd	nd	nd

Surrogate recoveries:				
Trifluorotoluene		120%	112%	102%
Bromofluorobenzene		115%	93%	71%

Data Qualifiers and Analytical Comments
 nd - not detected at listed reporting limits
 na - not analyzed
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results		Dupl			MS	
Metals Total (7010/747A), mg/L		MTH BLK	LCS	HC-4	HC-4	HC-4
Matrix	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	04/17/19	04/17/19	04/17/19	04/17/19	04/17/19
Date analyzed	Limits	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19
Lead (Pb)	0.002	nd	100%	0.002	nd	75%
Chromium (Cr)	0.01	nd	96%	nd	nd	92%
Cadmium (Cd)	0.005	nd	84%	nd	nd	92%
Arsenic (As)	0.005	nd	106%	nd	nd	115%
Mercury (Hg) (7470A)	0.0005	nd	118%	nd	nd	108%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90412-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19449-00
 Date received: 04/12/19

Analytical Results		MS MSD RPD					
PAH(8270), ug/L		MTH BLK	LCS	HC-4	HC-4	HC-4	HC-4
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19
Date analyzed	Limits	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19	04/18/19
Naphthalene	0.1	nd		nd			
1-MethylNaphthalene	0.1	nd		nd			
2-MethylNaphthalene	0.1	nd		nd			
Acenaphthylene	0.1	nd		nd			
Acenaphthene	0.1	nd	83%	nd	98%	83%	16%
Fluorene	0.1	nd		nd			
Phenanthrene	0.1	nd		nd			
Anthracene	0.1	nd		nd			
Fluoranthene	0.1	nd		nd			
Pyrene	0.1	nd	80%	nd	99%	85%	15%
Benzo(a)anthracene	0.1	nd		nd			
Chrysene	0.1	nd		nd			
Benzo(b)fluoranthene	0.1	nd		nd			
Benzo(k)fluoranthene	0.1	nd		nd			
Benzo(a)pyrene	0.1	nd		nd			
Indeno(1,2,3-cd)pyrene	0.1	nd		nd			
Dibenzo(ah)anthracene	0.1	nd		nd			
Benzo(ghi)perylene	0.1	nd		nd			

Surrogate recoveries:

Fluorobiphenyl	135%	101%	149%	104%	99%
o-Terphenyl	104%	102%	106%	99%	105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 50% TO 150%
 Acceptable RPD limit: 50%

April 23, 2019

*Julie Wukelic
Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, WA 98121*

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *6091 Dexter 19D1155070 (C90411-3)* Project.

Samples were received on *April 11, 2019*. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 702-8571.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Val G. Ivanov, Ph.D.
Laboratory Manager

4078 148 Ave NE ■ Redmond, WA 98052

425.702-8571

E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: _____



HART CROWSNER

Hart Crowsner, Inc.
 3131 Elliott Avenue, Suite 600
 Seattle, Washington 98121
 Office: 206.324.9530 • Fax 206.328.5581

JOB 1C1D1155070 LAB NUMBER _____
 PROJECT NAME 601 Duster
 HART CROWSNER CONTACT _____
 SAMPLED BY: M. Fony

REQUESTED ANALYSIS	
TPH-GX	<input checked="" type="checkbox"/>
TPH-DX	<input checked="" type="checkbox"/>
VOCS	<input checked="" type="checkbox"/>
TOTAL METALS	<input checked="" type="checkbox"/>
PAHS	<input checked="" type="checkbox"/>
PCBS	<input checked="" type="checkbox"/>
TPH-GX/STX	<input checked="" type="checkbox"/>
T.SS	<input checked="" type="checkbox"/>

NO. OF CONTAINERS _____
 OBSERVATIONS/COMMENTS/
 COMPOSITING INSTRUCTIONS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	TPH-GX	TPH-DX	VOCS	TOTAL METALS	PAHS	PCBS	TPH-GX/STX	T.SS	NO. OF CONTAINERS	PID reading (ppm)	Storage
	HC-1-5	S-1	4/3/19	0935	soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	20	SS
	HC-1-7.5	S-2		0948		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	9.4	SS
	HC-1-10	S-3		0957		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	15	SS
	HC-1-12.5	S-4		1005		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	140	SS
	HC-1-15	S-5		1008		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	64.4	SS
	HC-1-17.5	S-6		1026		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	89.7	SS
	HC-1-20	S-7		1034		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	275	NUS
	HC-1-25	S-8		1048		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	900	SS
	HC-1-30	S-9		1104		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	485	SS
	HC-1-100	S-10	4/3/19	1400	water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8	water found at 25ft. bgs	

RELINQUISHED BY: _____ DATE: 4/11/19
 RECEIVED BY: _____ DATE: _____
 SIGNATURE: _____ TIME: _____
 PRINT NAME: _____
 COMPANY: _____

RELINQUISHED BY: _____ DATE: _____
 RECEIVED BY: _____ DATE: _____
 SIGNATURE: _____ TIME: _____
 PRINT NAME: _____
 COMPANY: _____

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
METALS - MTC S
WATER METALS
DISSOLVED & TOTAL
MTA S

COOLER NO.: _____ STORAGE LOCATION: _____
 See Lab Work Order No. _____
 for Other Contract Requirements

TURNAROUND TIME:
 24 HOURS 1 WEEK
 48 HOURS STANDARD
 72 HOURS OTHER _____

SAMPLE RECEIPT INFORMATION
 CUSTODY SEALS: YES NO N/A
 GOOD CONDITION: YES NO
 TEMPERATURE: _____
 SHIPMENT METHOD: HAND OVERNIGHT
 COURIER

TOTAL NUMBER OF CONTAINERS _____

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record



Hart Crowser, Inc.
 3131 Elliott Avenue, Suite 600
 Seattle, Washington 98121
 Office: 206.324.9530 • Fax 206.328.5581

Samples Shipped to: _____

JOB ~~HC-5-5-194~~ **19449-00** LAB NUMBER _____

PROJECT NAME **601 Dexter**

HART CROWSER CONTACT **WJKEKIC**

SAMPLED BY: **M. Fong**

REQUESTED ANALYSIS

TPH-6X
 TPH-DX
 VOCs
 Total Metals
 PAHS
 PCBS

NO. OF CONTAINERS

OBSERVATIONS/COMMENTS/
 COMPOSITING INSTRUCTIONS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
1	HC-5-5	S-1	4/3/14	1305	soil	3	PID reading / Sheen test 0.0 / SS
2	HC-5-7.5	S-2		1323			0.0 / SS
3	HC-5-10	S-3		1335			0.0 / SS
4	HC-5-12.5	S-4		1415			0.0 / NS
5	HC-5-15	S-5		1435			0.0 / SS
6	HC-2-25	S-1		1520			0.0 / SS
7	HC-2-5	S-2		1525			0.0 / SS SS
8	HC-2-7.5	S-3		1545			0.0 / NS
9	HC-2-10	S-4		1602			0.0 / SS
10	HC-2-12.5	S-5		1609			SS SS
11	HC-2-15	S-6		1619			NS NS

RELINQUISHED BY: _____ DATE: **4/11/14** RECEIVED BY: _____ DATE: _____

SIGNATURE: _____ TIME: _____ SIGNATURE: _____ TIME: _____

PRINT NAME: **M. Fong** PRINT NAME: _____

COMPANY: **Hart Crowser** COMPANY: _____

RELINQUISHED BY: _____ DATE: _____ RECEIVED BY: _____ DATE: _____

SIGNATURE: _____ TIME: _____ SIGNATURE: _____ TIME: _____

PRINT NAME: _____ PRINT NAME: _____

COMPANY: _____ COMPANY: _____

COOLER NO.: _____ STORAGE LOCATION: _____

See Lab Work Order No. _____ for Other Contract Requirements

TURNAROUND TIME: 24 HOURS 1 WEEK 48 HOURS STANDARD 72 HOURS OTHER _____

SAMPLE RECEIPT INFORMATION: YES NO N/A

GOOD CONDITION: YES NO

TEMPERATURE: _____

SHIPMENT METHOD: HAND COURIER OVERNIGHT

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record

Samples Shipped to: _____



Hart Crowser, Inc.
 3131 Elliott Avenue, Suite 600
 Seattle, Washington 98121
 Office: 206.324.9530 • Fax 206.328.5581

JOB 19D1155070 LAB NUMBER _____
 PROJECT NAME 601 Dexter
 HART CROWSER CONTACT _____
 SAMPLED BY: W. Fong

REQUESTED ANALYSIS

TPH-GX
 TPH-DX
 VOCs
 Total Metals
 PAHs
 PCBs

NO. OF CONTAINERS

OBSERVATIONS/COMMENTS/
 COMPOSITING INSTRUCTIONS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NO. OF CONTAINERS	RID (FPM)	Green Test
	HC-4-5	S-1	4/14/19	1432	soil	3	0.0	SS
	HC-4-7.5	S-2		1445		1		SS
	HC-4-10	S-3		1455		3		SS
	HC-4-12.5	S-4		1505		1		SS
	HC-4-15	S-5		1515		3		SS
	HC-4-20	S-6		1536		3		SS
	HC-4-25	S-7		1545		3		SS
	HC-4-35	S-9		1633		3		SS

RELINQUISHED BY: [Signature] DATE: 4/11/19 TIME: _____
 RECEIVED BY: _____ DATE: _____ TIME: _____

SIGNATURE: Matthews Fong PRINT NAME: Matthews Fong COMPANY: _____
 SIGNATURE: Hart Crowser PRINT NAME: Hart Crowser COMPANY: _____

RELINQUISHED BY: _____ DATE: _____ RECEIVED BY: _____ DATE: _____

SIGNATURE: _____ TIME: _____
 PRINT NAME: _____ COMPANY: _____

COOLER NO.: _____ STORAGE LOCATION: _____

See Lab Work Order No. _____ for Other Contract Requirements

TURNAROUND TIME:
 24 HOURS 1 WEEK
 48 HOURS STANDARD
 72 HOURS OTHER _____

White to Lab Yellow to Project Manager Pink to Sample Custodian

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
 CUSTODY SEALS: YES NO N/A
 GOOD CONDITION: YES NO
 TEMPERATURE: _____
 SHIPMENT METHOD: HAND OVERNIGHT
 COURIER

Sample Custody Record

Samples Shipped to: _____



HART CROWSER

Hart Crowser, Inc.
 3131 Elliott Avenue, Suite 600
 Seattle, Washington 98121
 Office: 206.324.9530 • Fax 206.328.5581

JOB 19D1155070 LAB NUMBER _____

PROJECT NAME 601 Dexter

HART CROWSER CONTACT _____

SAMPLED BY: M. Fung

REQUESTED ANALYSIS

TPH-6X
 TPH-DX
 VOCs
 Total Metals
 PAHs
 PCBs

NO. OF CONTAINERS

OBSERVATIONS/COMMENTS/
 COMPOSITING INSTRUCTIONS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NO. OF CONTAINERS	PID (ppm)	SHOWN TEST
	HC-3-5	S-1	4/4/14	0820	Soil	3	0.0	SS
	HC-3-7.5	S-2		0830		1		SS
	HC-3-10	S-3		0835		3		NS
	HC-3-12.5	S-4		0845		1		NS
	HC-3-15	S-5		0855		3		SS
	HC-3-20	S-6		0910		3		NS
	HC-3-25	S-7		0925		3		SS
	HC-3-30	S-8		0944		3		SS

RELINQUISHED BY	DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	TOTAL NUMBER OF CONTAINERS
<u>M. Fung</u>	4/11/14				
<u>M. Fung</u>	4/11/14				
<u>H. Conson</u>	12/10				

SIGNATURE	DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	TOTAL NUMBER OF CONTAINERS
<u>M. Fung</u>	4/11/14				
<u>M. Fung</u>	4/11/14				
<u>H. Conson</u>	12/10				

COOLER NO.: _____ STORAGE LOCATION: _____

See Lab Work Order No. _____ for Other Contract Requirements

TURNAROUND TIME:
 24 HOURS 1 WEEK
 48 HOURS STANDARD
 72 HOURS OTHER _____

SAMPLE RECEIPT INFORMATION:
 CUSTODY SEALS: YES NO N/A
 GOOD CONDITION YES NO
 TEMPERATURE: _____
 SHIPMENT METHOD: HAND OVERNIGHT
 COURIER

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record

Samples Shipped to: _____



HART CROWSER

Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

JOB 19D1155070 LAB NUMBER _____
PROJECT NAME GO1 Dexter
HART CROWSER CONTACT _____

SAMPLED BY: M. Foy

REQUESTED ANALYSIS

TPH-GX
TPH-DX
VOCs
Total Metals
PAHs
PCBs

NO. OF CONTAINERS

OBSERVATIONS/COMMENTS/
COMPOSITING INSTRUCTIONS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX													
	MM-1-5	S-1	4/4/19	1035	Soil	XXX									3	0.0	SS	
	MM-1-7.5	S-2		1052		XXX									1		SS	
	MM-1-10	S-3		1102		XXX									3		SS	
	MM-1-12.5	S-4		1125		XXX									1		SS	
	MM-1-15	S-5		1130											3		SS	
	MM-1-20	S-6		1150											3		SS	
	MM-1-25	S-7		1158		XXX									3		SS	
	MM-1-30	S-8		1210		XXX									3		SS	
RELINQUISHED BY		DATE	RECEIVED BY		DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:											TOTAL NUMBER OF CONTAINERS	
<i>M. Foy</i>		<u>4/11/19</u>				STORAGE LOCATION: _____ COOLER NO.: _____											SAMPLE RECEIPT INFORMATION	
SIGNATURE		TIME	SIGNATURE		TIME												CUSTODY SEALS:	
PRINT NAME			PRINT NAME														YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>	
COMPANY			COMPANY														GOOD CONDITION <input type="checkbox"/> NO <input type="checkbox"/>	
RELINQUISHED BY		DATE	RECEIVED BY		DATE	STORAGE LOCATION: _____											TURNAROUND TIME:	
<i>M. Foy</i>		<u>12/10</u>				COOLER NO.: _____											24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/>	
SIGNATURE		TIME	SIGNATURE		TIME												48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/>	
PRINT NAME			PRINT NAME														72 HOURS <input type="checkbox"/> OTHER _____	
COMPANY			COMPANY															
																	TEMPERATURE _____	
																	SHIPMENT METHOD: <input type="checkbox"/> HAND <input type="checkbox"/> COURIER <input type="checkbox"/>	
																	COVERNIGHT <input type="checkbox"/>	

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record



C90411-3

①

Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

HARTCROWSER

Samples Shipped to: _____

JOB <u>191D1155070</u> LAB NUMBER _____ PROJECT NAME <u>601 Denver</u> HART CROWSER CONTACT _____ SAMPLED BY: <u>M. Fong</u>						REQUESTED ANALYSIS <u>TPH-GX</u> <u>TPH-DX</u> <u>VOCS</u> <u>TOTAL METALS</u> <u>PAHS</u> <u>PCBS</u> <u>TPH-GX/SIX</u> <u>TSS</u> <u>Lead</u>						NO. OF CONTAINERS 		OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS	
---------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--	---------------------------	--	----------------------------------------------------	--

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	TPH-GX	TPH-DX	VOCS	TOTAL METALS	PAHS	PCBS	TPH-GX/SIX	TSS	Lead	NO. OF CONTAINERS	PID reading (ppm)	Sheentest
	HC-1-5	S-1	4/3/19	0935	soil	X	X	X	X	X	X	X			3	20	SS
	HC-1-7.5	S-2		0948		X	X	X	X	X	X	X				9.4	SS
	HC-1-10	S-3		0957		X	X	X	X	X	X	X				15	SS
	HC-1-12.5	S-4		1005		X	X	X	X	X	X	X				140	SS
	HC-1-15	S-5		1008		X	X	X	X	X	X	X				64.4	SS
	HC-1-17.5	S-6		1026		X	X	X	X	X	X	X				39.7	SS
	HC-1-20	S-7		1034		X	X	X	X	X	X	X				275	NS
	HC-1-25	S-8		1048		X	X	X	X	X	X	X				900	SS
	HC-1-30	S-9		1104		X	X	X	X	X	X	X				485	SS
	HC-(LIM)	S-10	4/3/19	1400	water	X	X	X	X	X	X	X			8	Water found at 25A. bag	SS

⊗ Added by M. Goodman
04/22/19 VFE

RELINQUISHED BY SIGNATURE _____ PRINT NAME _____ COMPANY _____		DATE <u>4/11/19</u>	RECEIVED BY SIGNATURE <u>V. Ivanov</u> PRINT NAME <u>AAL</u> COMPANY _____		DATE <u>04/18/19</u>	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS: <u>METALS - MTC S</u> <u>WATER METALS DISSOLVED & TOTAL MTC S</u>		TOTAL NUMBER OF CONTAINERS 		SAMPLE RECEIPT INFORMATION CUSTODY SEALS: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A GOOD CONDITION: <input type="checkbox"/> YES <input type="checkbox"/> NO TEMPERATURE _____ SHIPMENT METHOD: <input type="checkbox"/> HAND <input type="checkbox"/> COURIER <input type="checkbox"/> OVERNIGHT	
RELINQUISHED BY SIGNATURE _____ PRINT NAME _____ COMPANY _____		DATE 	RECEIVED BY SIGNATURE _____ PRINT NAME _____ COMPANY _____		DATE 	COOLER NO.: _____ STORAGE LOCATION: _____		TURNAROUND TIME: <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____			

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record

Samples Shipped to: _____

HART CROWSER

C90411-3 (2)

Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

MR. XXXXXXXXXX 19449-00 LAB NUMBER PROJECT NAME <u>601 Dexter</u> HART CROWSER CONTACT <u>WUKELIC</u> SAMPLED BY: <u>R. King</u>						REQUESTED ANALYSIS TPH-GX TPH-DX VOCs Total Metals PAHS PCBs						NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX								
1	HC-5-5	S-1	4/3/19	1305	soil							3	0.0 / SS
2	HC-5-7.5	S-2		1323									0.0 / SS
3	HC-5-10	S-3		1335		XXXX							0.0 / SS
4	HC-5-12.5	S-4		1415									0.0 / NS
5	HC-5-15	S-5		1435		XXXX							0.0 / SS
6	HC-2-7.5	S-1		1520									0.0 / SS
7	HC-2-5	S-2		1525		X							0.0 / SS SS
8	HC-2-7.5	S-3		1545									0.0 / NS
9	HC-2-10	S-4		1602		XXX							0.0 / SS
10	HC-2-12.5	S-5		1609									0.0 / SS SS
11	HC-2-15	S-6		1619		XX X							0.0 / SS NS
RELINQUISHED BY		DATE	RECEIVED BY		DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:				TOTAL NUMBER OF CONTAINERS			
SIGNATURE		TIME	SIGNATURE		TIME					SAMPLE RECEIPT INFORMATION			
PRINT NAME		TIME	PRINT NAME		TIME	CUSTODY SEALS:			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				
COMPANY		TIME	COMPANY		TIME	GOOD CONDITION:			<input type="checkbox"/> YES <input type="checkbox"/> NO				
RELINQUISHED BY		DATE	RECEIVED BY		DATE	COOLER NO.:				SHIPMENT METHOD			
SIGNATURE		TIME	SIGNATURE		TIME	STORAGE LOCATION:				<input type="checkbox"/> HAND <input type="checkbox"/> COURIER <input type="checkbox"/> OVERNIGHT			
PRINT NAME		TIME	PRINT NAME		TIME	See Lab Work Order No. _____				TURNAROUND TIME:			
COMPANY		TIME	COMPANY		TIME	for Other Contract Requirements				<input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____			

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record



HART CROWSER

C90411-3 (4)

Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

Samples Shipped to: _____

JOB <u>140-58070</u> LAB NUMBER _____	REQUESTED ANALYSIS	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
PROJECT NAME <u>601 Dexter</u>	<u>TPH-6X</u> <u>TPH-DX</u> <u>VOLCS</u> <u>Total Metals</u> <u>PATHS</u> <u>P(Bs)</u>		
HART CROWSER CONTACT _____			
SAMPLED BY: <u>M. Fung</u>			

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	TPH-6X	TPH-DX	VOLCS	Total Metals	PATHS	P(Bs)	NO. OF CONTAINERS	PID (ppm)	Shien Test
	HC-3-5	S-1	4/4/19	0820	Soil							3	0.0	SS
	HC-3-75	S-2		0830		X	X	X				1		SS
	HC-3-10	S-3		0835								3		NS
	HC-3-17.5	S-4		0845						X	X	1		NS
	HC-3-15	S-5		0855	▽			X	X	X		3		SS
	HC-3-20	S-6		0910				X				3		NS
	HC-3-25	S-7		0925								3		SS
	HC-3-30	S-8	▽	0944	▽	X	X	X	X	X		3	▽	SS

RELINQUISHED BY	DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	TOTAL NUMBER OF CONTAINERS
<u>Matthew Fung</u> SIGNATURE	<u>4/12/19</u> TIME	<u>V. Ivanov</u> SIGNATURE	<u>04/18/19</u> TIME		SAMPLE RECEIPT INFORMATION
<u>Matthew Fung</u> PRINT NAME		<u>VAL IVANOV</u> PRINT NAME		COOLER NO.: _____ STORAGE LOCATION: _____	CUSTODY SEALS: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
<u>Hart Crowser</u> COMPANY	<u>1240</u>	<u>AAL</u> COMPANY			GOOD CONDITION <input type="checkbox"/> YES <input type="checkbox"/> NO
RELINQUISHED BY	DATE	RECEIVED BY	DATE	See Lab Work Order No. _____ for Other Contract Requirements	TEMPERATURE
SIGNATURE	TIME	SIGNATURE	TIME		SHIPMENT METHOD: <input type="checkbox"/> HAND <input type="checkbox"/> OVERNIGHT
PRINT NAME		PRINT NAME			TURNAROUND TIME:
COMPANY		COMPANY			<input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____

White to Lab Yellow to Project Manager Pink to Sample Custodian

Sample Custody Record



C90411-3 (5)

Hart Crowser, Inc.
3131 Elliott Avenue, Suite 600
Seattle, Washington 98121
Office: 206.324.9530 • Fax 206.328.5581

Samples Shipped to: _____

JOB 19D11SS070 LAB NUMBER						REQUESTED ANALYSIS						NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS	
PROJECT NAME 601 Dexter														
HART CROWSER CONTACT														
SAMPLED BY: M. Fong														
LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	TPH-6X	TPH-9X	VOCs	Total Metals	PAHs	PCBs		PID	Streak Test
	MW-1-5	S-1	4/4/19	1035	Soil	XXX						3	0.0	SS
	MW-1-7.5	S-2		1052								1		SS
	MW-1-10	S-3		1102		XXX	XXX	XXX	XXX			3		SS
	MW-1-12.5	S-4		1125								1		SS
	MW-1-15	S-5		1130								3		SS
	MW-1-20	S-6		1150								3		SS
	MW-1-25	S-7		1158		XXX	XXX	XXX	XXX			3		SS
	MW-1-30	S-8	↓	1210	↓	XXX	XXX	XXX	XXX			3	↓	SS moderate green

RELINQUISHED BY	DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	TOTAL NUMBER OF CONTAINERS
<i>[Signature]</i>	4/18/19	V. Ivanov	04/18/19		
SIGNATURE	TIME	SIGNATURE	TIME	COOLER NO.: _____ STORAGE LOCATION: _____	TURNAROUND TIME: <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____
PRINT NAME		PRINT NAME			
COMPANY		COMPANY			

RELINQUISHED BY	DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	TOTAL NUMBER OF CONTAINERS
<i>[Signature]</i>					
SIGNATURE	TIME	SIGNATURE	TIME	COOLER NO.: _____ STORAGE LOCATION: _____	TURNAROUND TIME: <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS OTHER _____
PRINT NAME		PRINT NAME			
COMPANY		COMPANY			

White to Lab Yellow to Project Manager Pink to Sample Custodian

AAL Job Number: C90411-3
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: 601 Dexter
Client Project Number: 19D1155070
Date received: 04/11/19

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		MS		MSD		RPD	
8260B, µg/L	MTH BLK	LCS	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Lim	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19
MTBE	5.0	nd	nd	nd			
Chloromethane	1.0	nd	nd	nd			
Vinyl chloride(*)	0.2	nd	nd	nd			
Bromomethane	1.0	nd	nd	nd			
Chloroethane	1.0	nd	nd	nd			
Trichlorofluoromethane	1.0	nd	nd	nd			
1,1-Dichloroethene	1.0	nd	nd	nd			
Methylene chloride	1.0	nd	nd	nd			
trans-1,2-Dichloroethene	1.0	nd	nd	nd			
1,1-Dichloroethane	1.0	nd	nd	nd			
2,2-Dichloropropane	1.0	nd	nd	nd			
cis-1,2-Dichloroethene	1.0	nd	nd	nd			
Chloroform	1.0	nd	nd	nd			
1,1,1-Trichloroethane	1.0	nd	nd	nd			
Carbontetrachloride	1.0	nd	nd	nd			
1,1-Dichloropropene	1.0	nd	nd	nd			
Benzene	1.0	nd	77%	nd	80%	80%	0%
1,2-Dichloroethane(EDC)	1.0	nd	nd	nd			
Trichloroethene	1.0	nd	78%	nd	82%	84%	3%
1,2-Dichloropropane	1.0	nd	nd	nd			
Dibromomethane	1.0	nd	nd	nd			
Bromodichloromethane	1.0	nd	nd	nd			
cis-1,3-Dichloropropene	1.0	nd	nd	nd			
Toluene	1.0	nd	90%	nd	88%	94%	6%
trans-1,3-Dichloropropene	1.0	nd	nd	nd			
1,1,2-Trichloroethane	1.0	nd	nd	nd			
Tetrachloroethene	1.0	nd	nd	nd			
1,3-Dichloropropane	1.0	nd	nd	nd			
Dibromochloromethane	1.0	nd	nd	nd			
1,2-Dibromoethane (EDB)*	0.01	nd	nd	nd			
Chlorobenzene	1.0	nd	100%	nd	98%	105%	7%
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd			
Ethylbenzene	1.0	nd	nd	25			
Xylenes	1.0	nd	nd	11			
Styrene	1.0	nd	nd	nd			
Bromoform	1.0	nd	nd	nd			
Isopropylbenzene	1.0	nd	nd	37			
1,2,3-Trichloropropane	1.0	nd	nd	nd			
Bromobenzene	1.0	nd	nd	nd			
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd			
n-Propylbenzene	1.0	nd	nd	51			
2-Chlorotoluene	1.0	nd	nd	nd			
4-Chlorotoluene	1.0	nd	nd	nd			
1,3,5-Trimethylbenzene	1.0	nd	nd	81			
tert-Butylbenzene	1.0	nd	nd	1.1			
1,2,4-Trimethylbenzene	1.0	nd	nd	150			
sec-Butylbenzene	1.0	nd	nd	12			
1,3-Dichlorobenzene	1.0	nd	nd	nd			

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		MS		MSD		RPD	
8260B, µg/L	MTH BLK	LCS	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Lim	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19
Isopropyltoluene	1.0	nd		19			
1,4-Dichlorobenzene	1.0	nd		nd			
1,2-Dichlorobenzene	1.0	nd		nd			
n-Butylbenzene	1.0	nd		12			
1,2-Dibromo-3-Chloropropane	1.0	nd		nd			
1,2,4-Trichlorobenzene	1.0	nd		nd			
Hexachloro-1,3-butadiene	1.0	nd		nd			
Naphthalene	1.0	nd		nd			
1,2,3-Trichlorobenzene	1.0	nd		nd			

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	89%	86%	88%	89%	88%
Toluene-d8	93%	79%	89%	89%	80%
1,2-Dichloroethane-d4	90%	98%	95%	95%	97%
4-Bromofluorobenzene	95%	95%	97%	97%	94%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl		
NWTPH-Dx, mg/L		MTH BLK	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water
Date extracted	Reporting	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19
Kerosene/Jet fuel	0.20	nd	nd	nd
Diesel/Fuel oil	0.20	nd	nd	nd
Heavy oil	0.50	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	110%	112%	115%
o-Terphenyl	117%	115%	116%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl			RPD
NWTPH-Gx		MTH BLK	HC-1-TMW	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	04/11/19	04/11/19	04/11/19	04/11/19

NWTPH-Gx, mg/L

Mineral spirits/Stoddard	0.10	nd	nd	nd	
Gasoline	0.10	nd	6.9	7.0	1%

Surrogate recoveries:

Trifluorotoluene	125%	C	C
Bromofluorobenzene	120%	121%	125%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl		RPD		MS	
Metals Total (7010/747A), mg/L	MTH BLK	LCS	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	04/17/19	04/17/19	04/17/19	04/17/19	04/17/19	04/17/19
Date analyzed	Limits	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19
Lead (Pb)	0.002	nd	100%	0.006	0.007	15%	75%
Chromium (Cr)	0.01	nd	96%	nd	nd		92%
Cadmium (Cd)	0.005	nd	84%	nd	nd		92%
Arsenic (As)	0.005	nd	106%	nd	nd		115%
Mercury (Hg) (7470A)	0.0005	nd	118%	nd	nd		108%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl			MS	
Metals Dissolved (7010/747A), mg/L		MTH BLK	LCS	HC-1-TMW	HC-1-TMW	HC-1-TMW
Matrix	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	04/17/19	04/17/19	04/17/19	04/17/19	04/17/19
Date analyzed	Limits	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19	04/17,18/19
Lead (Pb)	0.002	nd	100%	nd	nd	75%
Chromium (Cr)	0.01	nd	96%	nd	nd	92%
Cadmium (Cd)	0.005	nd	84%	nd	nd	92%
Arsenic (As)	0.005	nd	106%	nd	nd	115%
Mercury (Hg) (7470A)	0.0005	nd	118%	nd	nd	108%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: 601 Dexter
Client Project Number: 19D1155070
Date received: 04/11/19

Analytical Results

TSS (160.2)	HC-1-TMW	
Matrix	Water	Water
Date analyzed	Reporting Limits	04/16/19
Total Suspended Solids, mg/L	10	160

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		MTH BLK	LCS	MTH BLK	LCS	MW-1-10	MW-1-25	MW-1-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19
Date analyzed	Limits	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19
MTBE	100	nd		nd		nd	nd	nd
Dichlorodifluoromethane	50	nd		nd		nd	nd	nd
Chloromethane	50	nd		nd		nd	nd	nd
Vinyl chloride	50	nd		nd		nd	nd	nd
Bromomethane	50	nd		nd		nd	nd	nd
Chloroethane	50	nd		nd		nd	nd	nd
Trichlorofluoromethane	50	nd		nd		nd	nd	nd
1,1-Dichloroethene	50	nd		nd		nd	nd	nd
Methylene chloride	20	nd		nd		nd	nd	nd
trans-1,2-Dichloroethene	50	nd		nd		nd	nd	nd
1,1-Dichloroethane	50	nd		nd		nd	nd	nd
2,2-Dichloropropane	50	nd		nd		nd	nd	nd
cis-1,2-Dichloroethene	50	nd		nd		nd	nd	nd
Chloroform	50	nd		nd		nd	nd	nd
1,1,1-Trichloroethane	50	nd		nd		nd	nd	nd
Carbontetrachloride	50	nd		nd		nd	nd	nd
1,1-Dichloropropene	50	nd		nd		nd	nd	nd
Benzene	20	nd	77%	nd	95%	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd		nd		nd	nd	nd
Trichloroethene	20	nd	78%	nd	92%	nd	nd	nd
1,2-Dichloropropane	50	nd		nd		nd	nd	nd
Dibromomethane	50	nd		nd		nd	nd	nd
Bromodichloromethane	50	nd		nd		nd	nd	nd
cis-1,3-Dichloropropene	50	nd		nd		nd	nd	nd
Toluene	50	nd	90%	nd	104%	nd	nd	nd
trans-1,3-Dichloropropene	50	nd		nd		nd	nd	nd
1,1,2-Trichloroethane	50	nd		nd		nd	nd	nd
Tetrachloroethene	50	nd		nd		nd	nd	nd
1,3-Dichloropropane	50	nd		nd		nd	nd	nd
Dibromochloromethane	20	nd		nd		nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd		nd		nd	nd	nd
Chlorobenzene	50	nd	100%	nd	109%	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd		nd	nd	nd
Ethylbenzene	50	nd		nd		nd	nd	nd
Xylenes	50	nd		nd		nd	nd	nd
Styrene	50	nd		nd		nd	nd	nd
Bromoform	50	nd		nd		nd	nd	nd
Isopropylbenzene	50	nd		nd		nd	nd	nd
1,2,3-Trichloropropane	50	nd		nd		nd	nd	nd
Bromobenzene	50	nd		nd		nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd		nd	nd	nd
n-Propylbenzene	50	nd		nd		nd	nd	nd
2-Chlorotoluene	50	nd		nd		nd	nd	nd
4-Chlorotoluene	50	nd		nd		nd	nd	nd
1,3,5-Trimethylbenzene	50	nd		nd		nd	nd	nd
tert-Butylbenzene	50	nd		nd		nd	nd	nd
1,2,4-Trimethylbenzene	50	nd		nd		nd	nd	nd

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		MTH BLK	LCS	MTH BLK	LCS	MW-1-10	MW-1-25	MW-1-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19
Date analyzed	Limits	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19
sec-Butylbenzene	50	nd		nd		nd	nd	nd
1,3-Dichlorobenzene	50	nd		nd		nd	nd	nd
Isopropyltoluene	50	nd		nd		nd	nd	nd
1,4-Dichlorobenzene	50	nd		nd		nd	nd	nd
1,2-Dichlorobenzene	50	nd		nd		nd	nd	nd
n-Butylbenzene	50	nd		nd		nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd		nd	nd	nd
1,2,4-Trichlorobenzene	50	nd		nd		nd	nd	nd
Hexachloro-1,3-butadiene	50	nd		nd		nd	nd	nd
Naphthalene	50							
1,2,3-Trichlorobenzene	50	nd		nd		nd	nd	nd

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	89%	86%	92%	93%	83%	89%	90%
Toluene-d8	93%	79%	104%	90%	88%	98%	94%
1,2-Dichloroethane-d4	90%	98%	98%	100%	99%	96%	94%
4-Bromofluorobenzene	95%	95%	95%	98%	96%	93%	93%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 M-matrix interference
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		HC-1-12.5	HC-1-17.5	HC-1-25	HC-1-30	HC-5-15	HC-2-10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19	04/11/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19	04/11/19
MTBE	100	nd	nd	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	840	220	nd	nd
Xylenes	50	nd	nd	620	190	nd	nd
Styrene	50	nd	nd	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	660	130	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	1,400	320	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	1,900	430	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	50	nd	nd	2,800	970	nd	nd

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		HC-1-12.5	HC-1-17.5	HC-1-25	HC-1-30	HC-5-15	HC-2-10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19	04/11/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19	04/11/19
sec-Butylbenzene	50	nd	nd	660	100	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	1,000	160	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	1,000	170	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd	nd	nd
Naphthalene	50		nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd	nd	nd

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	86%	90%	88%	84%	83%	86%
Toluene-d8	90%	99%	90%	87%	89%	89%
1,2-Dichloroethane-d4	95%	97%	96%	97%	95%	98%
4-Bromofluorobenzene	102%	104%	129%	106%	100%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 M-matrix interference
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		HC-2-15	HC-4-15	HC-4-35	HC-3-7.5	HC-3-15	HC-3-20	HC-3-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/12/19
Date analyzed	Limits	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/12/19
MTBE	100	nd	nd	nd	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	310	nd	nd	nd	nd
Xylenes	50	nd	nd	190	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	79	nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	180	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	50	nd	nd	370	nd	nd	nd	nd

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results

8260B, µg/kg		HC-2-15	HC-4-15	HC-4-35	HC-3-7.5	HC-3-15	HC-3-20	HC-3-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/12/19
Date analyzed	Limits	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/12/19
sec-Butylbenzene	50	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd	nd	nd	nd
Naphthalene	50	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	84%	85%	84%	86%	85%	84%	90%
Toluene-d8	91%	88%	86%	91%	90%	90%	96%
1,2-Dichloroethane-d4	96%	96%	98%	98%	97%	98%	96%
4-Bromofluorobenzene	99%	95%	97%	98%	104%	96%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 M-matrix interference
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results		MS	MSD	RPD
8260B, µg/kg		HC-3-30	HC-3-30	HC-3-30
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19

MTBE	100			
Dichlorodifluoromethane	50			
Chloromethane	50			
Vinyl chloride	50			
Bromomethane	50			
Chloroethane	50			
Trichlorofluoromethane	50			
1,1-Dichloroethene	50			
Methylene chloride	20			
trans-1,2-Dichloroethene	50			
1,1-Dichloroethane	50			
2,2-Dichloropropane	50			
cis-1,2-Dichloroethene	50			
Chloroform	50			
1,1,1-Trichloroethane	50			
Carbontetrachloride	50			
1,1-Dichloropropene	50			
Benzene	20	95%	87%	9%
1,2-Dichloroethane(EDC)	20			
Trichloroethene	20	93%	84%	10%
1,2-Dichloropropane	50			
Dibromomethane	50			
Bromodichloromethane	50			
cis-1,3-Dichloropropene	50			
Toluene	50	102%	94%	8%
trans-1,3-Dichloropropene	50			
1,1,2-Trichloroethane	50			
Tetrachloroethene	50			
1,3-Dichloropropane	50			
Dibromochloromethane	20			
1,2-Dibromoethane (EDB)*	5			
Chlorobenzene	50	107%	96%	11%
1,1,1,2-Tetrachloroethane	50			
Ethylbenzene	50			
Xylenes	50			
Styrene	50			
Bromoform	50			
Isopropylbenzene	50			
1,2,3-Trichloropropane	50			
Bromobenzene	50			
1,1,2,2-Tetrachloroethane	50			
n-Propylbenzene	50			
2-Chlorotoluene	50			
4-Chlorotoluene	50			
1,3,5-Trimethylbenzene	50			
tert-Butylbenzene	50			
1,2,4-Trimethylbenzene	50			

AAL Job Number: C90411-3
 Client: Hart Crows
 Project Manager: Julie Wukel
 Client Project Name: 601 Dexter
 Client Project Number: 19D115507
 Date received: 04/11/19

Analytical Results		MS	MSD	RPD
8260B, µg/kg		HC-3-30	HC-3-30	HC-3-30
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19

sec-Butylbenzene	50
1,3-Dichlorobenzene	50
Isopropyltoluene	50
1,4-Dichlorobenzene	50
1,2-Dichlorobenzene	50
n-Butylbenzene	50
1,2-Dibromo-3-Chloropropane	50
1,2,4-Trichlorobenzene	50
Hexachloro-1,3-butadiene	50
Naphthalene	50
1,2,3-Trichlorobenzene	50

*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	90%	92%
Toluene-d8	89%	85%
1,2-Dichloroethane-d4	99%	99%
4-Bromofluorobenzene	101%	110%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 M-matrix interference
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	MW-1-10	MW-1-25	HC-1-5	HC-1-12.5	HC-1-15	HC-1-25
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	110%	108%	108%	105%	109%	104%	111%
o-Terphenyl	118%	112%	108%	98%	110%	95%	110%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

NWTPH-Dx, mg/kg		HC-1-30	HC-5-10	HC-5-15	HC-2-5	HC-2-10	HC-4-10	HC-4-15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	109%	107%	105%	108%	109%	108%	108%
o-Terphenyl	115%	109%	111%	111%	120%	112%	113%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl			
NWTPH-Dx, mg/kg		HC-4-35	HC-3-7.5	HC-3-30	HC-3-30
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/12/19	04/12/19	04/12/19	04/12/19
Date analyzed	Limits	04/12/19	04/12/19	04/12/19	04/12/19
Kerosene/Jet fuel	20	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	109%	107%	109%	104%
o-Terphenyl	115%	112%	113%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS MTH BLK		LCS	MW-1-10	MW-1-25	HC-1-5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19
Date analyzed	Limits	04/11/19	04/11/19	04/12/19	04/12/19	04/11/19	04/11/19	04/11/19

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	nd		nd		nd	nd	nd
Gasoline	5.0	nd		nd		nd	nd	nd

BTEX 8021B, µg/kg

Benzene	20	nd	104%	nd	98%			nd
Toluene	50	nd	105%	nd	98%			nd
Ethylbenzene	50	nd		nd				nd
Xylenes	50	nd		nd				nd

Surrogate recoveries:

Trifluorotoluene		110%	127%	106%	112%	96%	102%	99%
Bromofluorobenzene		72%	74%	77%	76%	104%	101%	96%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

NWTPH-Gx / BTEX		HC-1-10	HC-1-12.5	HC-1-20	HC-1-25	HC-1-30	HC-5-15	HC-2-10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19
Date analyzed	Limits	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19	04/11/19

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	290	30	nd	nd

BTEX 8021B, µg/kg

Benzene	20	nd		nd				
Toluene	50	nd		nd				
Ethylbenzene	50	nd		nd				
Xylenes	50	nd		nd				

Surrogate recoveries:

Trifluorotoluene	105%	105%	104%	130%	87%	93%	90%
Bromofluorobenzene	99%	88%	99%	99%	96%	86%	90%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results								MS
NWTPH-Gx / BTEX		HC-4-10	HC-4-15	HC-4-35	HC-3-7.5	HC-3-30	HC-3-30	
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19
Date analyzed	Limits	04/11/19	04/12/19	04/12/19	04/12/19	04/12/19	04/12/19	04/11/19

NWTPH-Gx, mg/kg								
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd	nd	
Gasoline	5.0	nd	nd	9.8	nd	nd	nd	

BTEX 8021B, µg/kg								
Benzene	20							89%
Toluene	50							116%
Ethylbenzene	50							
Xylenes	50							

Surrogate recoveries:								
Trifluorotoluene		98%	92%	91%	97%	99%	113%	130%
Bromofluorobenzene		87%	82%	82%	88%	85%	75%	123%

Data Qualifiers and Analytical Comments
 nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		MSD	RPD
NWTPH-Gx / BTEX			
Matrix	Soil	Soil	Soil
Date extracted	Reporting	04/11/19	04/11/19
Date analyzed	Limits	04/11/19	04/11/19

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0
Gasoline	5.0

BTEX 8021B, µg/kg

Benzene	20	111%	23%
Toluene	50	124%	6%
Ethylbenzene	50		
Xylenes	50		

Surrogate recoveries:

Trifluorotoluene	128%
Bromofluorobenzene	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 C - coelution with sample peaks
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

PAH (8270 sim), mg/kg		MTH BLK	LCS	HC1-10	HC1-20	HC4-15	HC3-12.5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
Date analyzed	Limits	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
1-Methylnaphthalene	0.10	nd		nd	nd	nd	nd
2-Methylnaphthalene	0.10	nd		nd	nd	nd	nd
Naphthalene	0.10	nd		nd	nd	nd	nd
Acenaphthylene	0.10	nd		nd	nd	nd	nd
Acenaphthene	0.10	nd	93%	nd	nd	nd	nd
Fluorene	0.10	nd		nd	nd	nd	nd
Phenanthrene	0.10	nd		nd	nd	nd	nd
Anthracene	0.10	nd		nd	nd	nd	nd
Fluoranthene	0.10	nd		nd	nd	nd	nd
Pyrene	0.10	nd	98%	nd	nd	nd	nd
Benzo(a)anthracene	0.10	nd		nd	nd	nd	nd
Chrysene	0.10	nd		nd	nd	nd	nd
Benzo(b)fluoranthene	0.10	nd		nd	nd	nd	nd
Benzo(k)fluoranthene	0.10	nd		nd	nd	nd	nd
Benzo(a)pyrene	0.10	nd		nd	nd	nd	nd
Indeno(1,2,3-cd)pyrene	0.10	nd		nd	nd	nd	nd
Dibenzo(ah)anthracene	0.10	nd		nd	nd	nd	nd
Benzo(ghi)perylene	0.10	nd		nd	nd	nd	nd

Surrogate recoveries:

2-Fluorobiphenyl	120%	107%	55%	58%	53%	56%
o-Terphenyl	101%	96%	102%	105%	105%	106%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 50% TO 150%
 Acceptable RPD limit: 50%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		MS	MSD	RPD
PAH (8270 sim), mg/kg		HC3-12.5	HC3-12.5	HC3-12.5
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/15/19	04/15/19	04/15/19
Date analyzed	Limits	04/15/19	04/15/19	04/15/19
1-Methylnaphthalene	0.10			
2-Methylnaphthalene	0.10			
Naphthalene	0.10			
Acenaphthylene	0.10			
Acenaphthene	0.10	76%	78%	3%
Fluorene	0.10			
Phenanthrene	0.10			
Anthracene	0.10			
Fluoranthene	0.10			
Pyrene	0.10	97%	98%	1%
Benzo(a)anthracene	0.10			
Chrysene	0.10			
Benzo(b)fluoranthene	0.10			
Benzo(k)fluoranthene	0.10			
Benzo(a)pyrene	0.10			
Indeno(1,2,3-cd)pyrene	0.10			
Dibenzo(ah)anthracene	0.10			
Benzo(ghi)perylene	0.10			
Surrogate recoveries:				
2-Fluorobiphenyl		50%	51%	
o-Terphenyl		99%	100%	

Data Qualifiers and Analytical Comments
 nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 50% TO 150%
 Acceptable RPD limit: 50%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		MS MSD RPD					
8082 (PCBs), mg/kg		MTH BLK	LCS	HC1-30	HC1-30	HC1-30	HC1-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
Date analyzed	Limits	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
A1221	0.20	nd		nd			
A1232	0.20	nd		nd			
A1242 (A1016)	0.20	nd		nd			
A1248	0.20	nd		nd			
A1254	0.20	nd		nd			
A1260	0.20	nd	111%	nd	75%	74%	1%

Surrogate recoveries:

Tetrachloro-m-xylene	94%	116%	90%	113%	115%
Decachlorobiphenyl	89%	111%	85%	109%	111%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

Metals (7010/7471), mg/kg		MTH BLK	LCS	HC-1-7.5	HC-1-15	HC-1-20	HC-1-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
Date analyzed	Limits	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19
Lead (Pb)	1.0	nd	86%	nd	nd	nd	nd
Chromium (Cr)	1.0	nd	93%	1.2	nd	nd	nd
Cadmium (Cd)	1.0	nd	98%	nd	nd	nd	nd
Arsenic (As)	1.0	nd	84%	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	92%	nd	nd	nd	nd

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M- matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl				MS	
Metals (7010/7471), mg/kg		HC-5-15	HC-4-15	HC-3-12.5	HC-3-12.5	HC-3-12.5	MTH BLK
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/22/19
Date analyzed	Limits	04/15/19	04/15/19	04/15/19	04/15/19	04/15/19	04/22/19
Lead (Pb)	1.0	nd	nd	nd	nd	M	nd
Chromium (Cr)	1.0	nd	nd	nd	nd	M	
Cadmium (Cd)	1.0	nd	nd	nd	nd	94%	
Arsenic (As)	1.0	nd	nd	nd	nd	114%	
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd	103%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M- matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results		Dupl		RPD		MS
Metals (7010/7471), mg/kg		LCS	HC-1-25	HC-1-25	HC-1-25	HC-1-25
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/22/19	04/22/19	04/22/19	04/22/19	04/22/19
Date analyzed	Limits	04/22/19	04/22/19	04/22/19	04/22/19	04/22/19
Lead (Pb)	1.0	70%	1.2	1.1	8%	95%
Chromium (Cr)	1.0					
Cadmium (Cd)	1.0					
Arsenic (As)	1.0					
Mercury (Hg) (7471)	0.5					

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M- matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

Moisture, SM2540B	MW-1-10	MW-1-25	MW-1-30	HC-1-5	HC-1-7.5	HC-1-10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19
Moisture, %	17%	16%	17%	17%	16%	15%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

Moisture, SM2540B	HC-1-12.5	HC-1-15	HC-1-17.5	HC-1-20	HC-1-25	HC-1-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19
Moisture, %	16%	16%	16%	15%	17%	17%

AAL Job Number: C90411-3
 Client: Hart Crowser, Inc.
 Project Manager: Julie Wukelic
 Client Project Name: 601 Dexter
 Client Project Number: 19D1155070
 Date received: 04/11/19

Analytical Results

Moisture, SM2540B	HC-5-10	HC-5-15	HC-2-5	HC-2-10	HC-2-15	HC-4-10	HC-4-15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19
Moisture, %	16%	16%	16%	15%	16%	17%	14%

AAL Job Number: C90411-3
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: 601 Dexter
Client Project Number: 19D1155070
Date received: 04/11/19

Analytical Results

Moisture, SM2540B	HC-4-35	HC-3-7.5	HC-3-12.5	HC-3-15	HC-3-20	HC-3-30
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19	04/16/19
Moisture, %	18%	19%	15%	18%	17%	19%



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

Hart Crowser, Inc.
Marissa Goodman
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: 601 Dexter
Work Order Number: 1904223

May 03, 2019

Attention Marissa Goodman:

Fremont Analytical, Inc. received 4 sample(s) on 4/11/2019 for the analyses presented in the following report.

Helium by GC/TCD
Major Gases by EPA Method 3C
Petroleum Fractionation by EPA Method TO-15
Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L 17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 05/03/2019

CLIENT: Hart Crowser, Inc.
Project: 601 Dexter
Work Order: 1904223

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1904223-001	CSE-1	04/10/2019 10:11 AM	04/11/2019 4:17 PM
1904223-002	CSW-1	04/10/2019 10:10 AM	04/11/2019 4:17 PM
1904223-003	SV-1	04/09/2019 4:50 PM	04/11/2019 4:17 PM
1904223-004	SV-2	04/10/2019 11:50 AM	04/11/2019 4:17 PM

CLIENT: Hart Crowser, Inc.

Project: 601 Dexter

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

Major gases are reported as % ratio of the Major Gases analyzed (Carbon dioxide, Carbon Monoxide, Methane, Nitrogen, Oxygen and Hydrogen).

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Note: Canister was pressurized with Nitrogen to obtain sample volume required to analyze Major Gases. See data results for additional information.

Rev1: Full list VOCs reported.



Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



CLIENT: Hart Crowser, Inc.

Project: 601 Dexter

Lab ID: 1904223-003

Collection Date: 4/9/2019 4:50:00 PM

Client Sample ID: SV-1

Matrix: Air

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Helium by GC/TCD

Batch ID: R50823 Analyst: AD

Helium	ND	100		ppt	1	4/18/2019 12:19:00 PM
--------	----	-----	--	-----	---	-----------------------

NOTES:

ppt = parts per thousand

Major Gases by EPA Method 3C

Batch ID: R50797 Analyst: AD

Carbon Dioxide	0.124	0.0690	D	%	1.38	4/17/2019 12:59:00 PM
Methane	ND	0.0690	D	%	1.38	4/17/2019 12:59:00 PM
Oxygen	23.8	0.0690	D	%	1.38	4/17/2019 12:59:00 PM

NOTES:

Canister was pressurized with Nitrogen to obtain sample volume required to analyze Major Gases. The added nitrogen resulted in a 1.38X dilution. Detections of analytes were adjusted accordingly.

Lab ID: 1904223-004

Collection Date: 4/10/2019 11:50:00 AM

Client Sample ID: SV-2

Matrix: Air

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Helium by GC/TCD

Batch ID: R50823 Analyst: AD

Helium	ND	100		ppt	1	4/18/2019 12:27:00 PM
--------	----	-----	--	-----	---	-----------------------

NOTES:

ppt = parts per thousand

Major Gases by EPA Method 3C

Batch ID: R50797 Analyst: AD

Carbon Dioxide	ND	0.0660	D	%	1.32	4/17/2019 2:01:00 PM
Methane	ND	0.0660	D	%	1.32	4/17/2019 2:01:00 PM
Oxygen	24.1	0.0660	D	%	1.32	4/17/2019 2:01:00 PM

NOTES:

Canister was pressurized with Nitrogen to obtain sample volume required to analyze Major Gases. The added nitrogen resulted in a 1.32X dilution. Detections of analytes were adjusted accordingly.



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSE-1

Lab ID: 1904223-001A

Sample Type: Summa Canister

Date Sampled: 4/10/2019

Date Received: 4/11/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Aliphatic Hydrocarbon (EC5-8)	34.6	132	7.50	28.5	EPA-TO-15 04/13/2019 AD
Aliphatic Hydrocarbon (EC9-12)	<7.50	<44.2	7.50	44.2	EPA-TO-15 04/13/2019 AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15 04/13/2019 AD
Surr: 4-Bromofluorobenzene	87.8 %Rec	--	70-130	--	EPA-TO-15 04/13/2019 AD
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.100	<0.546	0.100	0.546	EPA-TO-15 04/16/2019 AD
1,1,2,2-Tetrachloroethane	<0.0750	<0.515	0.0750	0.515	EPA-TO-15 04/16/2019 AD
CFC-113	<0.100	<0.766	0.100	0.766	EPA-TO-15 04/16/2019 AD
1,1,2-Trichloroethane (TCA)	<0.125	<0.682	0.125	0.682	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethene (DCE)	<0.100	<0.397	0.100	0.397	EPA-TO-15 04/16/2019 AD
1,2,4-Trichlorobenzene	<0.0750	<0.557	0.0750	0.557	* EPA-TO-15 04/16/2019 AD
1,2,4-Trimethylbenzene	<0.0750	<0.369	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,2-Dibromoethane (EDB)	<0.0500	<0.384	0.0500	0.384	EPA-TO-15 04/16/2019 AD
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 04/16/2019 AD
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,2-Dichloropropane	<0.125	<0.578	0.125	0.578	EPA-TO-15 04/16/2019 AD
1,3,5-Trimethylbenzene	<0.0750	<0.369	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,3-Butadiene	<0.125	<0.277	0.125	0.277	EPA-TO-15 04/16/2019 AD
1,3-Dichlorobenzene	<0.0750	<0.451	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dichlorobenzene	<0.0750	<0.451	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dioxane	<0.100	<0.360	0.100	0.360	* EPA-TO-15 04/16/2019 AD
(MEK) 2-Butanone	0.384	1.13	0.250	0.737	EPA-TO-15 04/16/2019 AD
2-Hexanone	<0.250	<1.02	0.250	1.02	* EPA-TO-15 04/16/2019 AD
Isopropyl Alcohol	0.978	2.40	0.250	0.614	EPA-TO-15 04/16/2019 AD
4-Methyl-2-pentanone (MIBK)	<0.250	<1.02	0.250	1.02	EPA-TO-15 04/16/2019 AD
Acetone	3.48	8.26	0.250	0.594	EPA-TO-15 04/16/2019 AD
Acrolein	0.553	1.27	0.125	0.287	EPA-TO-15 04/16/2019 AD
Benzene	0.183	0.586	0.0224	0.0715	B EPA-TO-15 04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSE-1

Lab ID: 1904223-001A

Sample Type: Summa Canister

Date Sampled: 4/10/2019

Date Received: 4/11/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.125	<0.647	0.125	0.647		EPA-TO-15	04/16/2019 AD
Dichlorobromomethane	<0.0750	<0.502	0.0750	0.502		EPA-TO-15	04/16/2019 AD
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	04/16/2019 AD
Bromomethane	<0.125	<0.485	0.125	0.485		EPA-TO-15	04/16/2019 AD
Carbon disulfide	<0.375	<1.17	0.375	1.17		EPA-TO-15	04/16/2019 AD
Carbon tetrachloride	0.0745	0.469	0.0164	0.103		EPA-TO-15	04/16/2019 AD
Chlorobenzene	<0.0500	<0.230	0.0500	0.230		EPA-TO-15	04/16/2019 AD
Dibromochloromethane	<0.125	<1.06	0.125	1.06		EPA-TO-15	04/16/2019 AD
Chloroethane	<0.100	<0.264	0.100	0.264		EPA-TO-15	04/16/2019 AD
Chloroform	<0.0500	<0.244	0.0500	0.244		EPA-TO-15	04/16/2019 AD
Chloromethane	0.534	1.10	0.125	0.258		EPA-TO-15	04/16/2019 AD
cis-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
cis-1,3-dichloropropene	<0.100	<0.454	0.100	0.454		EPA-TO-15	04/16/2019 AD
Cyclohexane	0.183	0.629	0.100	0.344		EPA-TO-15	04/16/2019 AD
Dichlorodifluoromethane (CFC-12)	0.348	1.72	0.100	0.495		EPA-TO-15	04/16/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.100	<0.699	0.100	0.699		EPA-TO-15	04/16/2019 AD
Ethyl acetate	<0.250	<0.901	0.250	0.901		EPA-TO-15	04/16/2019 AD
Ethylbenzene	<0.100	<0.434	0.100	0.434		EPA-TO-15	04/16/2019 AD
Heptane	0.108	0.433	0.100	0.402		EPA-TO-15	04/16/2019 AD
Hexachlorobutadiene	<0.250	<2.67	0.250	2.67		EPA-TO-15	04/16/2019 AD
m,p-Xylene	<0.200	<0.868	0.200	0.868		EPA-TO-15	04/16/2019 AD
Methyl methacrylate	<0.100	<0.409	0.100	0.409		EPA-TO-15	04/16/2019 AD
Methylene chloride	<0.500	<1.74	0.500	1.74	*	EPA-TO-15	04/16/2019 AD
Naphthalene	0.298	1.56	0.00319	0.0167	MDL	EPA-TO-15	04/16/2019 AD
n-Hexane	0.492	1.74	0.100	0.352		EPA-TO-15	04/16/2019 AD
o-Xylene	<0.100	<0.434	0.100	0.434		EPA-TO-15	04/16/2019 AD
4-Ethyltoluene	<0.100	<0.492	0.100	0.492		EPA-TO-15	04/16/2019 AD
Propylene	<0.100	<0.172	0.100	0.172		EPA-TO-15	04/16/2019 AD
Styrene	<0.100	<0.426	0.100	0.426		EPA-TO-15	04/16/2019 AD
Methyl tert-butyl ether (MTBE)	<0.100	<0.361	0.100	0.361		EPA-TO-15	04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSE-1

Date Sampled: 4/10/2019

Lab ID: 1904223-001A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	<0.0500	<0.339	0.0500	0.339		EPA-TO-15	04/16/2019 AD
Tetrahydrofuran	<0.100	<0.295	0.100	0.295		EPA-TO-15	04/16/2019 AD
Toluene	0.305	1.15	0.100	0.377		EPA-TO-15	04/16/2019 AD
trans-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
trans-1,3-dichloropropene	<0.125	<0.567	0.125	0.567		EPA-TO-15	04/16/2019 AD
Trichloroethene (TCE)	<0.0162	<0.0872	0.0162	0.0872		EPA-TO-15	04/16/2019 AD
Trichlorofluoromethane (CFC-11)	0.245	1.38	0.100	0.562		EPA-TO-15	04/16/2019 AD
Vinyl acetate	<0.250	<0.880	0.250	0.880		EPA-TO-15	04/16/2019 AD
Vinyl chloride	<0.0268	<0.0685	0.0268	0.0685		EPA-TO-15	04/16/2019 AD
Surr: 4-Bromofluorobenzene	87.5 %Rec	--	70-130	--		EPA-TO-15	04/16/2019 AD

NOTES:

* - Flagged value is not within established control limits.

MDL - Analyte reported to Method Detection Limit (MDL)



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSW-1

Date Sampled: 4/10/2019

Lab ID: 1904223-002A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Aliphatic Hydrocarbon (EC5-8)	48.1	183	7.50	28.5	EPA-TO-15 04/13/2019 AD
Aliphatic Hydrocarbon (EC9-12)	<7.50	<44.2	7.50	44.2	EPA-TO-15 04/13/2019 AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15 04/13/2019 AD
Surr: 4-Bromofluorobenzene	83.9 %Rec	--	70-130	--	EPA-TO-15 04/13/2019 AD
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.100	<0.546	0.100	0.546	EPA-TO-15 04/16/2019 AD
1,1,2,2-Tetrachloroethane	<0.0750	<0.515	0.0750	0.515	EPA-TO-15 04/16/2019 AD
CFC-113	<0.100	<0.766	0.100	0.766	EPA-TO-15 04/16/2019 AD
1,1,2-Trichloroethane (TCA)	<0.125	<0.682	0.125	0.682	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethene (DCE)	<0.100	<0.397	0.100	0.397	EPA-TO-15 04/16/2019 AD
1,2,4-Trichlorobenzene	<0.0750	<0.557	0.0750	0.557	* EPA-TO-15 04/16/2019 AD
1,2,4-Trimethylbenzene	<0.0750	<0.369	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,2-Dibromoethane (EDB)	<0.0500	<0.384	0.0500	0.384	EPA-TO-15 04/16/2019 AD
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 04/16/2019 AD
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,2-Dichloropropane	<0.125	<0.578	0.125	0.578	EPA-TO-15 04/16/2019 AD
1,3,5-Trimethylbenzene	<0.0750	<0.369	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,3-Butadiene	0.411	0.910	0.125	0.277	EPA-TO-15 04/16/2019 AD
1,3-Dichlorobenzene	<0.0750	<0.451	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dichlorobenzene	<0.0750	<0.451	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dioxane	<0.100	<0.360	0.100	0.360	* EPA-TO-15 04/16/2019 AD
(MEK) 2-Butanone	0.387	1.14	0.250	0.737	EPA-TO-15 04/16/2019 AD
2-Hexanone	<0.250	<1.02	0.250	1.02	* EPA-TO-15 04/16/2019 AD
Isopropyl Alcohol	1.01	2.48	0.250	0.614	EPA-TO-15 04/16/2019 AD
4-Methyl-2-pentanone (MIBK)	<0.250	<1.02	0.250	1.02	EPA-TO-15 04/16/2019 AD
Acetone	3.91	9.29	0.250	0.594	EPA-TO-15 04/16/2019 AD
Acrolein	0.681	1.56	0.125	0.287	EPA-TO-15 04/16/2019 AD
Benzene	0.238	0.761	0.0224	0.0715	B EPA-TO-15 04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSW-1

Lab ID: 1904223-002A

Sample Type: Summa Canister

Date Sampled: 4/10/2019

Date Received: 4/11/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.125	<0.647	0.125	0.647		EPA-TO-15	04/16/2019 AD
Dichlorobromomethane	<0.0750	<0.502	0.0750	0.502		EPA-TO-15	04/16/2019 AD
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	04/16/2019 AD
Bromomethane	<0.125	<0.485	0.125	0.485		EPA-TO-15	04/16/2019 AD
Carbon disulfide	<0.375	<1.17	0.375	1.17		EPA-TO-15	04/16/2019 AD
Carbon tetrachloride	0.0744	0.468	0.0164	0.103		EPA-TO-15	04/16/2019 AD
Chlorobenzene	<0.0500	<0.230	0.0500	0.230		EPA-TO-15	04/16/2019 AD
Dibromochloromethane	<0.125	<1.06	0.125	1.06		EPA-TO-15	04/16/2019 AD
Chloroethane	<0.100	<0.264	0.100	0.264		EPA-TO-15	04/16/2019 AD
Chloroform	<0.0500	<0.244	0.0500	0.244		EPA-TO-15	04/16/2019 AD
Chloromethane	0.569	1.18	0.125	0.258		EPA-TO-15	04/16/2019 AD
cis-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
cis-1,3-dichloropropene	<0.100	<0.454	0.100	0.454		EPA-TO-15	04/16/2019 AD
Cyclohexane	0.255	0.878	0.100	0.344		EPA-TO-15	04/16/2019 AD
Dichlorodifluoromethane (CFC-12)	0.364	1.80	0.100	0.495		EPA-TO-15	04/16/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.100	<0.699	0.100	0.699		EPA-TO-15	04/16/2019 AD
Ethyl acetate	0.366	1.32	0.250	0.901		EPA-TO-15	04/16/2019 AD
Ethylbenzene	<0.100	<0.434	0.100	0.434		EPA-TO-15	04/16/2019 AD
Heptane	0.162	0.652	0.100	0.402		EPA-TO-15	04/16/2019 AD
Hexachlorobutadiene	<0.250	<2.67	0.250	2.67		EPA-TO-15	04/16/2019 AD
m,p-Xylene	<0.200	<0.868	0.200	0.868		EPA-TO-15	04/16/2019 AD
Methyl methacrylate	<0.100	<0.409	0.100	0.409		EPA-TO-15	04/16/2019 AD
Methylene chloride	<0.500	<1.74	0.500	1.74	*	EPA-TO-15	04/16/2019 AD
Naphthalene	0.297	1.56	0.00319	0.0167	MDL	EPA-TO-15	04/16/2019 AD
n-Hexane	0.910	3.21	0.100	0.352		EPA-TO-15	04/16/2019 AD
o-Xylene	<0.100	<0.434	0.100	0.434		EPA-TO-15	04/16/2019 AD
4-Ethyltoluene	<0.100	<0.492	0.100	0.492		EPA-TO-15	04/16/2019 AD
Propylene	<0.100	<0.172	0.100	0.172		EPA-TO-15	04/16/2019 AD
Styrene	<0.100	<0.426	0.100	0.426		EPA-TO-15	04/16/2019 AD
Methyl tert-butyl ether (MTBE)	<0.100	<0.361	0.100	0.361		EPA-TO-15	04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: CSW-1

Date Sampled: 4/10/2019

Lab ID: 1904223-002A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	<0.0500	<0.339	0.0500	0.339		EPA-TO-15	04/16/2019 AD
Tetrahydrofuran	<0.100	<0.295	0.100	0.295		EPA-TO-15	04/16/2019 AD
Toluene	0.314	1.18	0.100	0.377		EPA-TO-15	04/16/2019 AD
trans-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
trans-1,3-dichloropropene	<0.125	<0.567	0.125	0.567		EPA-TO-15	04/16/2019 AD
Trichloroethene (TCE)	<0.0162	<0.0872	0.0162	0.0872		EPA-TO-15	04/16/2019 AD
Trichlorofluoromethane (CFC-11)	0.273	1.53	0.100	0.562		EPA-TO-15	04/16/2019 AD
Vinyl acetate	<0.250	<0.880	0.250	0.880		EPA-TO-15	04/16/2019 AD
Vinyl chloride	<0.0268	<0.0685	0.0268	0.0685		EPA-TO-15	04/16/2019 AD
Surr: 4-Bromofluorobenzene	85.0 %Rec	--	70-130	--		EPA-TO-15	04/16/2019 AD

NOTES:

* - Flagged value is not within established control limits.

MDL - Analyte reported to Method Detection Limit (MDL)



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-1

Lab ID: 1904223-003A

Sample Type: Summa Canister

Date Sampled: 4/9/2019

Date Received: 4/11/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Aliphatic Hydrocarbon (EC5-8)	38.0	144	7.50	28.5	EPA-TO-15 04/13/2019 AD
Aliphatic Hydrocarbon (EC9-12)	178	1,050	75.0	442	EPA-TO-15 04/13/2019 AD
Aromatic Hydrocarbon (EC9-10)	38.0	191	6.25	31.4	EPA-TO-15 04/13/2019 AD
Surr: 4-Bromofluorobenzene	93.4 %Rec	--	70-130	--	EPA-TO-15 04/13/2019 AD
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.100	<0.546	0.100	0.546	EPA-TO-15 04/16/2019 AD
1,1,2,2-Tetrachloroethane	<0.0750	<0.515	0.0750	0.515	EPA-TO-15 04/16/2019 AD
CFC-113	<0.100	<0.766	0.100	0.766	EPA-TO-15 04/16/2019 AD
1,1,2-Trichloroethane (TCA)	<0.125	<0.682	0.125	0.682	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,1-Dichloroethene (DCE)	<0.100	<0.397	0.100	0.397	EPA-TO-15 04/16/2019 AD
1,2,4-Trichlorobenzene	<0.0750	<0.557	0.0750	0.557	* EPA-TO-15 04/16/2019 AD
1,2,4-Trimethylbenzene	3.03	14.9	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,2-Dibromoethane (EDB)	<0.0500	<0.384	0.0500	0.384	EPA-TO-15 04/16/2019 AD
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 04/16/2019 AD
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15 04/16/2019 AD
1,2-Dichloropropane	<0.125	<0.578	0.125	0.578	EPA-TO-15 04/16/2019 AD
1,3,5-Trimethylbenzene	1.96	9.61	0.0750	0.369	EPA-TO-15 04/16/2019 AD
1,3-Butadiene	0.129	0.285	0.125	0.277	EPA-TO-15 04/16/2019 AD
1,3-Dichlorobenzene	0.113	0.681	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dichlorobenzene	<0.0750	<0.451	0.0750	0.451	EPA-TO-15 04/16/2019 AD
1,4-Dioxane	<0.100	<0.360	0.100	0.360	* EPA-TO-15 04/16/2019 AD
(MEK) 2-Butanone	2.66	7.86	0.250	0.737	EPA-TO-15 04/16/2019 AD
2-Hexanone	<0.250	<1.02	0.250	1.02	* EPA-TO-15 04/16/2019 AD
Isopropyl Alcohol	1.80	4.43	0.250	0.614	EPA-TO-15 04/16/2019 AD
4-Methyl-2-pentanone (MIBK)	<0.250	<1.02	0.250	1.02	EPA-TO-15 04/16/2019 AD
Acetone	20.8	49.4	0.250	0.594	EPA-TO-15 04/16/2019 AD
Acrolein	0.445	1.02	0.125	0.287	EPA-TO-15 04/16/2019 AD
Benzene	0.908	2.90	0.0224	0.0715	B EPA-TO-15 04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-1

Date Sampled: 4/9/2019

Lab ID: 1904223-003A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.125	<0.647	0.125	0.647		EPA-TO-15	04/16/2019 AD
Dichlorobromomethane	<0.0750	<0.502	0.0750	0.502		EPA-TO-15	04/16/2019 AD
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	04/16/2019 AD
Bromomethane	<0.125	<0.485	0.125	0.485		EPA-TO-15	04/16/2019 AD
Carbon disulfide	<0.375	<1.17	0.375	1.17		EPA-TO-15	04/16/2019 AD
Carbon tetrachloride	0.0912	0.574	0.0164	0.103		EPA-TO-15	04/16/2019 AD
Chlorobenzene	<0.0500	<0.230	0.0500	0.230		EPA-TO-15	04/16/2019 AD
Dibromochloromethane	<0.125	<1.06	0.125	1.06		EPA-TO-15	04/16/2019 AD
Chloroethane	<0.100	<0.264	0.100	0.264		EPA-TO-15	04/16/2019 AD
Chloroform	0.178	0.871	0.0500	0.244		EPA-TO-15	04/16/2019 AD
Chloromethane	<0.125	<0.258	0.125	0.258		EPA-TO-15	04/16/2019 AD
cis-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
cis-1,3-dichloropropene	<0.100	<0.454	0.100	0.454		EPA-TO-15	04/16/2019 AD
Cyclohexane	0.116	0.401	0.100	0.344		EPA-TO-15	04/16/2019 AD
Dichlorodifluoromethane (CFC-12)	0.470	2.33	0.100	0.495		EPA-TO-15	04/16/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.100	<0.699	0.100	0.699		EPA-TO-15	04/16/2019 AD
Ethyl acetate	<0.250	<0.901	0.250	0.901		EPA-TO-15	04/16/2019 AD
Ethylbenzene	0.220	0.954	0.100	0.434		EPA-TO-15	04/16/2019 AD
Heptane	0.129	0.517	0.100	0.402		EPA-TO-15	04/16/2019 AD
Hexachlorobutadiene	<0.250	<2.67	0.250	2.67		EPA-TO-15	04/16/2019 AD
m,p-Xylene	0.781	3.39	0.200	0.868		EPA-TO-15	04/16/2019 AD
Methyl methacrylate	<0.100	<0.409	0.100	0.409		EPA-TO-15	04/16/2019 AD
Methylene chloride	<0.500	<1.74	0.500	1.74	*	EPA-TO-15	04/16/2019 AD
Naphthalene	0.631	3.31	0.0250	0.131		EPA-TO-15	04/16/2019 AD
n-Hexane	0.123	0.434	0.100	0.352		EPA-TO-15	04/16/2019 AD
o-Xylene	0.339	1.47	0.100	0.434		EPA-TO-15	04/16/2019 AD
4-Ethyltoluene	0.420	2.06	0.100	0.492		EPA-TO-15	04/16/2019 AD
Propylene	1.33	2.29	0.100	0.172		EPA-TO-15	04/16/2019 AD
Styrene	0.113	0.481	0.100	0.426		EPA-TO-15	04/16/2019 AD
Methyl tert-butyl ether (MTBE)	<0.100	<0.361	0.100	0.361		EPA-TO-15	04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-1

Date Sampled: 4/9/2019

Lab ID: 1904223-003A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	0.280	1.90	0.0500	0.339		EPA-TO-15	04/16/2019 AD
Tetrahydrofuran	<0.100	<0.295	0.100	0.295		EPA-TO-15	04/16/2019 AD
Toluene	2.17	8.18	0.100	0.377		EPA-TO-15	04/16/2019 AD
trans-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
trans-1,3-dichloropropene	<0.125	<0.567	0.125	0.567		EPA-TO-15	04/16/2019 AD
Trichloroethene (TCE)	<0.0162	<0.0872	0.0162	0.0872		EPA-TO-15	04/16/2019 AD
Trichlorofluoromethane (CFC-11)	0.312	1.75	0.100	0.562		EPA-TO-15	04/16/2019 AD
Vinyl acetate	<0.250	<0.880	0.250	0.880		EPA-TO-15	04/16/2019 AD
Vinyl chloride	<0.0268	<0.0685	0.0268	0.0685		EPA-TO-15	04/16/2019 AD
Surr: 4-Bromofluorobenzene	94.9 %Rec	--	70-130	--		EPA-TO-15	04/16/2019 AD

NOTES:

* - Flagged value is not within established control limits.



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-2

Date Sampled: 4/10/2019

Lab ID: 1904223-004A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
---------	---------------	-----------------	------	--------	--------------

Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Aliphatic Hydrocarbon (EC5-8)	270	1,030	75.0	285	EPA-TO-15	04/15/2019	AD
Aliphatic Hydrocarbon (EC9-12)	57.8	340	75.0	442	EPA-TO-15	04/15/2019	AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15	04/15/2019	AD
Surr: 4-Bromofluorobenzene	87.6 %Rec	--	70-130	--	EPA-TO-15	04/15/2019	AD

Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.100	<0.546	0.100	0.546	EPA-TO-15	04/16/2019	AD	
1,1,2,2-Tetrachloroethane	<0.0750	<0.515	0.0750	0.515	EPA-TO-15	04/16/2019	AD	
CFC-113	<0.100	<0.766	0.100	0.766	EPA-TO-15	04/16/2019	AD	
1,1,2-Trichloroethane (TCA)	<0.125	<0.682	0.125	0.682	EPA-TO-15	04/16/2019	AD	
1,1-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15	04/16/2019	AD	
1,1-Dichloroethene (DCE)	<0.100	<0.397	0.100	0.397	EPA-TO-15	04/16/2019	AD	
1,2,4-Trichlorobenzene	<0.0750	<0.557	0.0750	0.557	*	EPA-TO-15	04/16/2019	AD
1,2,4-Trimethylbenzene	1.49	7.35	0.0750	0.369	EPA-TO-15	04/16/2019	AD	
1,2-Dibromoethane (EDB)	<0.0500	<0.384	0.0500	0.384	EPA-TO-15	04/16/2019	AD	
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15	04/16/2019	AD	
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202	EPA-TO-15	04/16/2019	AD	
1,2-Dichloropropane	<0.125	<0.578	0.125	0.578	EPA-TO-15	04/16/2019	AD	
1,3,5-Trimethylbenzene	0.382	1.88	0.0750	0.369	EPA-TO-15	04/16/2019	AD	
1,3-Butadiene	0.428	0.946	0.125	0.277	EPA-TO-15	04/16/2019	AD	
1,3-Dichlorobenzene	0.297	1.78	0.0750	0.451	EPA-TO-15	04/16/2019	AD	
1,4-Dichlorobenzene	0.329	1.98	0.0750	0.451	EPA-TO-15	04/16/2019	AD	
1,4-Dioxane	<0.100	<0.360	0.100	0.360	*	EPA-TO-15	04/16/2019	AD
(MEK) 2-Butanone	1.71	5.03	0.250	0.737	EPA-TO-15	04/16/2019	AD	
2-Hexanone	<0.250	<1.02	0.250	1.02	*	EPA-TO-15	04/16/2019	AD
Isopropyl Alcohol	4.64	11.4	0.250	0.614	EPA-TO-15	04/16/2019	AD	
4-Methyl-2-pentanone (MIBK)	<0.250	<1.02	0.250	1.02	EPA-TO-15	04/16/2019	AD	
Acetone	34.2	81.3	0.250	0.594	EPA-TO-15	04/16/2019	AD	
Acrolein	0.373	0.855	0.125	0.287	EPA-TO-15	04/16/2019	AD	
Benzene	0.916	2.93	0.0224	0.0715	B	EPA-TO-15	04/16/2019	AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-2

Date Sampled: 4/10/2019

Lab ID: 1904223-004A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.125	<0.647	0.125	0.647		EPA-TO-15	04/16/2019 AD
Dichlorobromomethane	<0.0750	<0.502	0.0750	0.502		EPA-TO-15	04/16/2019 AD
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	04/16/2019 AD
Bromomethane	<0.125	<0.485	0.125	0.485		EPA-TO-15	04/16/2019 AD
Carbon disulfide	<0.375	<1.17	0.375	1.17		EPA-TO-15	04/16/2019 AD
Carbon tetrachloride	0.0815	0.513	0.0164	0.103		EPA-TO-15	04/16/2019 AD
Chlorobenzene	0.0626	0.288	0.0500	0.230		EPA-TO-15	04/16/2019 AD
Dibromochloromethane	<0.125	<1.06	0.125	1.06		EPA-TO-15	04/16/2019 AD
Chloroethane	<0.100	<0.264	0.100	0.264		EPA-TO-15	04/16/2019 AD
Chloroform	<0.0500	<0.244	0.0500	0.244		EPA-TO-15	04/16/2019 AD
Chloromethane	<0.125	<0.258	0.125	0.258		EPA-TO-15	04/16/2019 AD
cis-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
cis-1,3-dichloropropene	<0.100	<0.454	0.100	0.454		EPA-TO-15	04/16/2019 AD
Cyclohexane	1.48	5.08	0.100	0.344		EPA-TO-15	04/16/2019 AD
Dichlorodifluoromethane (CFC-12)	0.428	2.11	0.100	0.495		EPA-TO-15	04/16/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.100	<0.699	0.100	0.699		EPA-TO-15	04/16/2019 AD
Ethyl acetate	1.16	4.17	0.250	0.901		EPA-TO-15	04/16/2019 AD
Ethylbenzene	0.386	1.67	0.100	0.434		EPA-TO-15	04/16/2019 AD
Heptane	1.72	6.90	0.100	0.402		EPA-TO-15	04/16/2019 AD
Hexachlorobutadiene	<0.250	<2.67	0.250	2.67		EPA-TO-15	04/16/2019 AD
m,p-Xylene	1.60	6.93	0.200	0.868		EPA-TO-15	04/16/2019 AD
Methyl methacrylate	<0.100	<0.409	0.100	0.409		EPA-TO-15	04/16/2019 AD
Methylene chloride	<0.500	<1.74	0.500	1.74	*	EPA-TO-15	04/16/2019 AD
Naphthalene	0.528	2.77	0.0250	0.131		EPA-TO-15	04/16/2019 AD
n-Hexane	3.56	12.6	0.100	0.352		EPA-TO-15	04/16/2019 AD
o-Xylene	0.565	2.45	0.100	0.434		EPA-TO-15	04/16/2019 AD
4-Ethyltoluene	0.429	2.11	0.100	0.492		EPA-TO-15	04/16/2019 AD
Propylene	<0.100	<0.172	0.100	0.172		EPA-TO-15	04/16/2019 AD
Styrene	<0.100	<0.426	0.100	0.426		EPA-TO-15	04/16/2019 AD
Methyl tert-butyl ether (MTBE)	0.284	1.02	0.100	0.361		EPA-TO-15	04/16/2019 AD



Client: Hart Crowser, Inc.

WorkOrder: 1904223

Project: 601 Dexter

Client Sample ID: SV-2

Date Sampled: 4/10/2019

Lab ID: 1904223-004A

Date Received: 4/11/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	0.160	1.09	0.0500	0.339		EPA-TO-15	04/16/2019 AD
Tetrahydrofuran	0.173	0.511	0.100	0.295		EPA-TO-15	04/16/2019 AD
Toluene	1.92	7.25	0.100	0.377		EPA-TO-15	04/16/2019 AD
trans-1,2-Dichloroethene	<0.0500	<0.198	0.0500	0.198		EPA-TO-15	04/16/2019 AD
trans-1,3-dichloropropene	<0.125	<0.567	0.125	0.567		EPA-TO-15	04/16/2019 AD
Trichloroethene (TCE)	0.0425	0.228	0.0162	0.0872		EPA-TO-15	04/16/2019 AD
Trichlorofluoromethane (CFC-11)	0.291	1.63	0.100	0.562		EPA-TO-15	04/16/2019 AD
Vinyl acetate	<0.250	<0.880	0.250	0.880		EPA-TO-15	04/16/2019 AD
Vinyl chloride	<0.0268	<0.0685	0.0268	0.0685		EPA-TO-15	04/16/2019 AD
Surr: 4-Bromofluorobenzene	92.3 %Rec	--	70-130	--		EPA-TO-15	04/16/2019 AD

NOTES:

* - Flagged value is not within established control limits.

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID	LCS-R50742A	SampType:	LCS	Units:	ppbv	Prep Date:	4/13/2019	RunNo:	50742		
Client ID:	LCSW	Batch ID:	R50742			Analysis Date:	4/13/2019	SeqNo:	996885		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	12.4	7.50	12.00	0	103	70	130				
Aliphatic Hydrocarbon (EC9-12)	11.9	7.50	12.00	0	98.9	70	130				
Aromatic Hydrocarbon (EC9-10)	9.35	6.25	10.00	0	93.5	70	130				
Surr: 4-Bromofluorobenzene	4.04		4.000		101	70	130				

Sample ID	MB-R50742A	SampType:	MBLK	Units:	ppbv	Prep Date:	4/13/2019	RunNo:	50742		
Client ID:	MBLKW	Batch ID:	R50742			Analysis Date:	4/13/2019	SeqNo:	996886		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	7.50									
Aromatic Hydrocarbon (EC9-10)	ND	6.25									
Surr: 4-Bromofluorobenzene	3.26		4.000		81.5	70	130				

Sample ID	1904223-001AREP	SampType:	REP	Units:	ppbv	Prep Date:	4/13/2019	RunNo:	50742		
Client ID:	CSE-1	Batch ID:	R50742			Analysis Date:	4/13/2019	SeqNo:	996888		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	37.7	7.50						34.59	8.56	30	
Aliphatic Hydrocarbon (EC9-12)	ND	7.50						0		30	
Aromatic Hydrocarbon (EC9-10)	ND	6.25						0		30	
Surr: 4-Bromofluorobenzene	3.49		4.000		87.3	70	130		0		

Sample ID	LCS-R50742B	SampType:	LCS	Units:	ppbv	Prep Date:	4/15/2019	RunNo:	50742		
Client ID:	LCSW	Batch ID:	R50742			Analysis Date:	4/15/2019	SeqNo:	996892		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	13.4	7.50	12.00	0	112	70	130				
Aliphatic Hydrocarbon (EC9-12)	12.9	7.50	12.00	0	108	70	130				

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID LCS-R50742B	SampType: LCS	Units: ppbv			Prep Date: 4/15/2019	RunNo: 50742					
Client ID: LCSW	Batch ID: R50742				Analysis Date: 4/15/2019	SeqNo: 996892					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (EC9-10)	9.48	6.25	10.00	0	94.8	70	130				
Surr: 4-Bromofluorobenzene	4.14		4.000		104	70	130				

Sample ID MB-R50742B	SampType: MBLK	Units: ppbv			Prep Date: 4/15/2019	RunNo: 50742					
Client ID: MBLKW	Batch ID: R50742				Analysis Date: 4/15/2019	SeqNo: 996893					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	7.50									
Aromatic Hydrocarbon (EC9-10)	ND	6.25									
Surr: 4-Bromofluorobenzene	3.18		4.000		79.4	70	130				

Sample ID 1904223-004AREP	SampType: REP	Units: ppbv			Prep Date: 4/15/2019	RunNo: 50742					
Client ID: SV-2	Batch ID: R50742				Analysis Date: 4/15/2019	SeqNo: 996897					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	135	7.50						129.8	4.03	30	E
Aliphatic Hydrocarbon (EC9-12)	229	7.50						231.6	1.03	30	E
Aromatic Hydrocarbon (EC9-10)	6.29	6.25						6.199	1.49	30	
Surr: 4-Bromofluorobenzene	3.51		4.000		87.8	70	130		0		

NOTES:

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

Sample ID LCS-R50742C	SampType: LCS	Units: ppbv			Prep Date: 4/17/2019	RunNo: 50742					
Client ID: LCSW	Batch ID: R50742				Analysis Date: 4/17/2019	SeqNo: 998547					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	14.5	7.50	12.00	0	121	70	130				
Aliphatic Hydrocarbon (EC9-12)	12.2	7.50	12.00	0	101	70	130				
Aromatic Hydrocarbon (EC9-10)	10.3	6.25	10.00	0	103	70	130				

Work Order: 1904223
 CLIENT: Hart Crowser, Inc.
 Project: 601 Dexter

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID	LCS-R50742C	SampType:	LCS	Units:	ppbv	Prep Date:	4/17/2019	RunNo:	50742		
Client ID:	LCSW	Batch ID:	R50742			Analysis Date:	4/17/2019	SeqNo:	998547		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene 3.86 4.000 96.5 70 130

Sample ID	MB-R50742C	SampType:	MBLK	Units:	ppbv	Prep Date:	4/17/2019	RunNo:	50742		
Client ID:	MBLKW	Batch ID:	R50742			Analysis Date:	4/17/2019	SeqNo:	998548		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8) ND 7.50
 Aliphatic Hydrocarbon (EC9-12) ND 7.50
 Aromatic Hydrocarbon (EC9-10) ND 6.25
 Surr: 4-Bromofluorobenzene 3.62 4.000 90.5 70 130

Sample ID	1904262-001AREP	SampType:	REP	Units:	ppbv	Prep Date:	4/17/2019	RunNo:	50742		
Client ID:	BATCH	Batch ID:	R50742			Analysis Date:	4/17/2019	SeqNo:	998552		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8) 735 7.50 732.9 0.265 30 E
 Aliphatic Hydrocarbon (EC9-12) 2,540 7.50 2,514 0.849 30 E
 Aromatic Hydrocarbon (EC9-10) 7.36 6.25 7.280 1.14 30
 Surr: 4-Bromofluorobenzene 3.92 4.000 98.1 70 130 0

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

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Helium by GC/TCD

Sample ID LCS-R50823	SampType: LCS	Units: ppt			Prep Date: 4/18/2019	RunNo: 50823					
Client ID: LCSW	Batch ID: R50823				Analysis Date: 4/18/2019	SeqNo: 998791					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium	100	100	100.0	0	100	80	120
--------	-----	-----	-------	---	-----	----	-----

NOTES:
 ppt = parts per thousand

Sample ID MB-R50823	SampType: MBLK	Units: ppt			Prep Date: 4/18/2019	RunNo: 50823					
Client ID: MBLKW	Batch ID: R50823				Analysis Date: 4/18/2019	SeqNo: 998792					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium	ND	100
--------	----	-----

NOTES:
 ppt = parts per thousand

Sample ID 1904223-03AREP	SampType: REP	Units: ppt			Prep Date: 4/18/2019	RunNo: 50823					
Client ID: BATCH	Batch ID: R50823				Analysis Date: 4/18/2019	SeqNo: 998789					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium	ND	100				0	30
--------	----	-----	--	--	--	---	----

NOTES:
 ppt = parts per thousand

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Major Gases by EPA Method 3C

Sample ID: LCS-R50797	SampType: LCS	Units: %	Prep Date: 4/17/2019	RunNo: 50797							
Client ID: LCSW	Batch ID: R50797		Analysis Date: 4/17/2019	SeqNo: 998276							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon Dioxide	100	0.0500	100.0	0	100	70	130				
Methane	100	0.0500	100.0	0	100	70	130				
Oxygen	100	0.0500	100.0	0	100	70	130				

Sample ID: 1904223-001AREP	SampType: REP	Units: %	Prep Date: 4/17/2019	RunNo: 50797							
Client ID: CSE-1	Batch ID: R50797		Analysis Date: 4/17/2019	SeqNo: 998272							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon Dioxide	0.108	0.0865						0.09276	15.0	30	D
Methane	ND	0.0865						0		30	D
Oxygen	24.6	0.0865						24.68	0.219	30	D

NOTES:

Canister was pressurized with Nitrogen to obtain sample volume required to analyze Major Gases. The added nitrogen resulted in a 1.73X dilution. Detections of analytes were adjusted accordingly.



Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	LCS-R50768	SampType:	LCS	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768
Client ID:	LCSW	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997502

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	2.19	0.400	2.000	0	109	70	130				
Dichlorodifluoromethane (CFC-12)	2.15	0.400	2.000	0	108	70	130				
Chloromethane	2.18	0.500	2.000	0	109	70	130				
Dichlorotetrafluoroethane (CFC-114)	2.09	0.400	2.000	0	104	70	130				
Vinyl chloride	2.09	0.107	2.000	0	105	70	130				
1,3-Butadiene	1.90	0.500	2.000	0	94.8	70	130				
Bromomethane	2.01	0.500	2.000	0	101	70	130				
Trichlorofluoromethane (CFC-11)	2.11	0.400	2.000	0	106	70	130				
Chloroethane	1.95	0.400	2.000	0	97.5	70	130				
Acrolein	1.56	0.500	2.000	0	77.9	70	130				
1,1-Dichloroethene (DCE)	1.91	0.400	2.000	0	95.7	70	130				
Acetone	2.13	1.00	2.000	0	106	70	130				
Isopropyl Alcohol	2.27	1.00	2.000	0	114	70	130				
Methylene chloride	0.451	2.00	2.000	0	22.6	70	130				S
Carbon disulfide	2.00	1.50	2.000	0	99.9	70	130				
trans-1,2-Dichloroethene	2.19	0.200	2.000	0	109	70	130				
Methyl tert-butyl ether (MTBE)	2.36	0.400	2.000	0	118	70	130				
n-Hexane	1.76	0.400	2.000	0	88.1	70	130				
1,1-Dichloroethane	2.04	0.200	2.000	0	102	70	130				
Vinyl acetate	2.31	1.00	2.000	0	116	70	130				
cis-1,2-Dichloroethene	1.82	0.200	2.000	0	90.8	70	130				
(MEK) 2-Butanone	2.30	1.00	2.000	0	115	70	130				
Ethyl acetate	1.74	1.00	2.000	0	87.1	70	130				
Chloroform	2.09	0.200	2.000	0	104	70	130				
Tetrahydrofuran	1.80	0.400	2.000	0	90.1	70	130				
1,1,1-Trichloroethane	1.97	0.400	2.000	0	98.5	70	130				
Carbon tetrachloride	1.94	0.0657	2.000	0	97.0	70	130				
1,2-Dichloroethane	2.02	0.200	2.000	0	101	70	130				
Benzene	1.87	0.0895	2.000	0	93.6	70	130				
Cyclohexane	1.85	0.400	2.000	0	92.3	70	130				
Trichloroethene (TCE)	1.98	0.0649	2.000	0	99.2	70	130				



Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R50768	SampType: LCS	Units: ppbv	Prep Date: 4/16/2019	RunNo: 50768
Client ID: LCSW	Batch ID: R50768		Analysis Date: 4/16/2019	SeqNo: 997502

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	2.04	0.500	2.000	0	102	70	130				
Methyl methacrylate	1.87	0.400	2.000	0	93.4	70	130				
Dichlorobromomethane	2.08	0.300	2.000	0	104	70	130				
1,4-Dioxane	1.27	0.400	2.000	0	63.4	70	130				S
cis-1,3-dichloropropene	1.69	0.400	2.000	0	84.6	70	130				
Toluene	1.64	0.400	2.000	0	82.2	70	130				
trans-1,3-dichloropropene	1.90	0.500	2.000	0	95.0	70	130				
1,1,2-Trichloroethane (TCA)	2.00	0.500	2.000	0	100	70	130				
Tetrachloroethene (PCE)	2.01	0.200	2.000	0	101	70	130				
Dibromochloromethane	1.90	0.500	2.000	0	94.9	70	130				
1,2-Dibromoethane (EDB)	1.90	0.200	2.000	0	95.2	70	130				
Chlorobenzene	1.95	0.200	2.000	0	97.5	70	130				
Ethylbenzene	1.68	0.400	2.000	0	84.0	70	130				
m,p-Xylene	3.33	0.800	4.000	0	83.2	70	130				
o-Xylene	1.68	0.400	2.000	0	83.8	70	130				
Styrene	1.63	0.400	2.000	0	81.3	70	130				
Bromoform	1.89	0.200	2.000	0	94.3	70	130				
1,1,1,2-Tetrachloroethane	1.92	0.300	2.000	0	95.8	70	130				
1,3,5-Trimethylbenzene	1.69	0.300	2.000	0	84.7	70	130				
1,2,4-Trimethylbenzene	1.54	0.300	2.000	0	76.9	70	130				
Benzyl chloride	1.53	0.500	2.000	0	76.5	70	130				
4-Ethyltoluene	1.64	0.400	2.000	0	82.1	70	130				
1,3-Dichlorobenzene	1.79	0.300	2.000	0	89.4	70	130				
1,4-Dichlorobenzene	1.73	0.300	2.000	0	86.5	70	130				
1,2-Dichlorobenzene	1.82	0.400	2.000	0	90.9	70	130				
1,2,4-Trichlorobenzene	1.36	0.300	2.000	0	67.9	70	130				S
Hexachlorobutadiene	1.73	1.00	2.000	0	86.4	70	130				
Naphthalene	1.63	0.100	2.000	0	81.5	70	130				
2-Hexanone	1.10	1.00	2.000	0	55.0	70	130				S
4-Methyl-2-pentanone (MIBK)	1.53	1.00	2.000	0	76.6	70	130				
CFC-113	1.98	0.400	2.000	0	99.1	70	130				

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	LCS-R50768	SampType:	LCS	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768		
Client ID:	LCSW	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997502		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Heptane	1.77	0.400	2.000	0	88.6	70	130				
Surr: 4-Bromofluorobenzene	4.26		4.000		106	70	130				

NOTES:

S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID	LCS-D-R50768	SampType:	LCS-D	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768		
Client ID:	LCSW02	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997503		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Propylene	2.23	0.400	2.000	0	112	70	130	2.188	2.05	30	
Dichlorodifluoromethane (CFC-12)	2.19	0.400	2.000	0	109	70	130	2.152	1.61	30	
Chloromethane	2.19	0.500	2.000	0	109	70	130	2.175	0.600	30	
Dichlorotetrafluoroethane (CFC-114)	2.13	0.400	2.000	0	107	70	130	2.087	2.18	30	
Vinyl chloride	2.08	0.107	2.000	0	104	70	130	2.093	0.817	30	
1,3-Butadiene	1.87	0.500	2.000	0	93.5	70	130	1.896	1.35	30	
Bromomethane	1.99	0.500	2.000	0	99.3	70	130	2.010	1.24	30	
Trichlorofluoromethane (CFC-11)	2.09	0.400	2.000	0	105	70	130	2.112	0.862	30	
Chloroethane	2.05	0.400	2.000	0	102	70	130	1.949	4.95	30	
Acrolein	1.58	0.500	2.000	0	79.0	70	130	1.558	1.41	30	
1,1-Dichloroethene (DCE)	1.94	0.400	2.000	0	96.8	70	130	1.915	1.12	30	
Acetone	2.14	1.00	2.000	0	107	70	130	2.130	0.624	30	
Isopropyl Alcohol	2.34	1.00	2.000	0	117	70	130	2.271	3.12	30	
Methylene chloride	0.677	2.00	2.000	0	33.8	70	130	0		30	S
Carbon disulfide	1.99	1.50	2.000	0	99.3	70	130	1.998	0.582	30	
trans-1,2-Dichloroethene	2.14	0.200	2.000	0	107	70	130	2.189	2.30	30	
Methyl tert-butyl ether (MTBE)	2.34	0.400	2.000	0	117	70	130	2.362	1.09	30	
n-Hexane	1.78	0.400	2.000	0	88.9	70	130	1.762	0.964	30	
1,1-Dichloroethane	2.04	0.200	2.000	0	102	70	130	2.042	0.334	30	
Vinyl acetate	2.29	1.00	2.000	0	115	70	130	2.314	0.853	30	
cis-1,2-Dichloroethene	1.79	0.200	2.000	0	89.6	70	130	1.817	1.41	30	
(MEK) 2-Butanone	2.30	1.00	2.000	0	115	70	130	2.301	0.206	30	



Work Order: 1904223
 CLIENT: Hart Crowser, Inc.
 Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS D-R50768	SampType: LCS D	Units: ppbv	Prep Date: 4/16/2019	RunNo: 50768
Client ID: LCS W02	Batch ID: R50768		Analysis Date: 4/16/2019	SeqNo: 997503

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethyl acetate	1.74	1.00	2.000	0	87.2	70	130	1.741	0.186	30	
Chloroform	2.08	0.200	2.000	0	104	70	130	2.086	0.0806	30	
Tetrahydrofuran	1.87	0.400	2.000	0	93.3	70	130	1.802	3.43	30	
1,1,1-Trichloroethane	1.96	0.400	2.000	0	97.9	70	130	1.970	0.653	30	
Carbon tetrachloride	1.91	0.0657	2.000	0	95.3	70	130	1.939	1.67	30	
1,2-Dichloroethane	2.00	0.200	2.000	0	100	70	130	2.020	1.03	30	
Benzene	1.90	0.0895	2.000	0	95.1	70	130	1.872	1.63	30	
Cyclohexane	1.84	0.400	2.000	0	92.1	70	130	1.845	0.147	30	
Trichloroethene (TCE)	2.00	0.0649	2.000	0	100	70	130	1.984	1.05	30	
1,2-Dichloropropane	2.01	0.500	2.000	0	101	70	130	2.041	1.41	30	
Methyl methacrylate	1.90	0.400	2.000	0	94.9	70	130	1.868	1.53	30	
Dichlorobromomethane	2.05	0.300	2.000	0	103	70	130	2.080	1.30	30	
1,4-Dioxane	1.25	0.400	2.000	0	62.7	70	130	1.267	0.991	30	S
cis-1,3-dichloropropene	1.65	0.400	2.000	0	82.7	70	130	1.692	2.31	30	
Toluene	1.65	0.400	2.000	0	82.3	70	130	1.644	0.156	30	
trans-1,3-dichloropropene	1.90	0.500	2.000	0	94.9	70	130	1.899	0.0996	30	
1,1,2-Trichloroethane (TCA)	1.98	0.500	2.000	0	99.0	70	130	2.004	1.26	30	
Tetrachloroethene (PCE)	2.01	0.200	2.000	0	100	70	130	2.015	0.467	30	
Dibromochloromethane	1.89	0.500	2.000	0	94.5	70	130	1.897	0.385	30	
1,2-Dibromoethane (EDB)	1.85	0.200	2.000	0	92.5	70	130	1.905	2.90	30	
Chlorobenzene	1.93	0.200	2.000	0	96.7	70	130	1.951	0.893	30	
Ethylbenzene	1.70	0.400	2.000	0	85.0	70	130	1.680	1.24	30	
m,p-Xylene	3.33	0.800	4.000	0	83.2	70	130	3.328	0.0409	30	
o-Xylene	1.68	0.400	2.000	0	84.1	70	130	1.676	0.388	30	
Styrene	1.63	0.400	2.000	0	81.4	70	130	1.626	0.192	30	
Bromoform	1.86	0.200	2.000	0	92.8	70	130	1.886	1.64	30	
1,1,2,2-Tetrachloroethane	1.90	0.300	2.000	0	95.0	70	130	1.917	0.933	30	
1,3,5-Trimethylbenzene	1.71	0.300	2.000	0	85.4	70	130	1.694	0.868	30	
1,2,4-Trimethylbenzene	1.52	0.300	2.000	0	75.9	70	130	1.538	1.35	30	
Benzyl chloride	1.52	0.500	2.000	0	75.9	70	130	1.530	0.843	30	
4-Ethyltoluene	1.63	0.400	2.000	0	81.3	70	130	1.641	0.880	30	

Work Order: 1904223
 CLIENT: Hart Crowser, Inc.
 Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	LCS-D-R50768	SampType:	LCS-D	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768		
Client ID:	LCSW02	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997503		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	1.74	0.300	2.000	0	87.1	70	130	1.788	2.63	30	
1,4-Dichlorobenzene	1.69	0.300	2.000	0	84.3	70	130	1.730	2.57	30	
1,2-Dichlorobenzene	1.77	0.400	2.000	0	88.5	70	130	1.818	2.68	30	
1,2,4-Trichlorobenzene	1.27	0.300	2.000	0	63.5	70	130	1.358	6.77	30	S
Hexachlorobutadiene	1.66	1.00	2.000	0	82.9	70	130	1.728	4.19	30	
Naphthalene	1.55	0.100	2.000	0	77.3	70	130	1.629	5.20	30	
2-Hexanone	1.12	1.00	2.000	0	56.2	70	130	1.100	2.24	30	S
4-Methyl-2-pentanone (MIBK)	1.48	1.00	2.000	0	74.2	70	130	1.531	3.09	30	
CFC-113	1.99	0.400	2.000	0	99.4	70	130	1.981	0.361	30	
Heptane	1.79	0.400	2.000	0	89.7	70	130	1.772	1.21	30	
Surr: 4-Bromofluorobenzene	4.15		4.000		104	70	130		0		

NOTES:

S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID	MB-R50768	SampType:	MBLK	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768		
Client ID:	MBLKW	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997504		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	0.100									
Dichlorodifluoromethane (CFC-12)	ND	0.100									
Chloromethane	ND	0.125									
Dichlorotetrafluoroethane (CFC-114)	ND	0.100									
Vinyl chloride	ND	0.0268									
1,3-Butadiene	ND	0.125									
Bromomethane	ND	0.125									
Trichlorofluoromethane (CFC-11)	ND	0.100									
Chloroethane	ND	0.100									
Acrolein	ND	0.125									
1,1-Dichloroethene (DCE)	ND	0.100									
Acetone	ND	0.250									
Isopropyl Alcohol	ND	0.250									

Work Order: 1904223
CLIENT: Hart Crowser, Inc.
Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: MB-R50768	SampType: MBLK	Units: ppbv	Prep Date: 4/16/2019	RunNo: 50768							
Client ID: MBLKW	Batch ID: R50768		Analysis Date: 4/16/2019	SeqNo: 997504							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methylene chloride	ND	0.500									*
Carbon disulfide	ND	0.375									
trans-1,2-Dichloroethene	ND	0.0500									
Methyl tert-butyl ether (MTBE)	ND	0.100									
n-Hexane	ND	0.100									
1,1-Dichloroethane	ND	0.0500									
Vinyl acetate	ND	0.250									
cis-1,2-Dichloroethene	ND	0.0500									
(MEK) 2-Butanone	ND	0.250									
Ethyl acetate	ND	0.250									
Chloroform	ND	0.0500									
Tetrahydrofuran	ND	0.100									
1,1,1-Trichloroethane	ND	0.100									
Carbon tetrachloride	ND	0.0164									
1,2-Dichloroethane	ND	0.0500									
Benzene	0.0961	0.0224									
Cyclohexane	ND	0.100									
Trichloroethene (TCE)	ND	0.0162									
1,2-Dichloropropane	ND	0.125									
Methyl methacrylate	ND	0.100									
Dichlorobromomethane	ND	0.0750									
1,4-Dioxane	ND	0.100									*
cis-1,3-dichloropropene	ND	0.100									
Toluene	ND	0.100									
trans-1,3-dichloropropene	ND	0.125									
1,1,2-Trichloroethane (TCA)	ND	0.125									
Tetrachloroethene (PCE)	ND	0.0500									
Dibromochloromethane	ND	0.125									
1,2-Dibromoethane (EDB)	ND	0.0500									
Chlorobenzene	ND	0.0500									
Ethylbenzene	ND	0.100									



Date: 5/3/2019

Work Order: 1904223
 CLIENT: Hart Crowser, Inc.
 Project: 601 Dexter

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	MB-R50768	SampType:	MBLK	Units:	ppbv	Prep Date:	4/16/2019	RunNo:	50768		
Client ID:	MBLKW	Batch ID:	R50768			Analysis Date:	4/16/2019	SeqNo:	997504		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

m,p-Xylene	ND	0.200									
o-Xylene	ND	0.100									
Styrene	ND	0.100									
Bromoform	ND	0.0500									
1,1,1,2-Tetrachloroethane	ND	0.0750									
1,3,5-Trimethylbenzene	ND	0.0750									
1,2,4-Trimethylbenzene	ND	0.0750									
Benzyl chloride	ND	0.125									
4-Ethyltoluene	ND	0.100									
1,3-Dichlorobenzene	ND	0.0750									
1,4-Dichlorobenzene	ND	0.0750									
1,2-Dichlorobenzene	ND	0.100									
1,2,4-Trichlorobenzene	ND	0.0750									*
Hexachlorobutadiene	ND	0.250									
Naphthalene	ND	0.00319									MDL
2-Hexanone	ND	0.250									*
4-Methyl-2-pentanone (MIBK)	ND	0.250									
CFC-113	ND	0.100									
Heptane	ND	0.100									
Surr: 4-Bromofluorobenzene	0.834		1.000		83.4	70	130				

NOTES:

* - Flagged value is not within established control limits.
 MDL - Analyte reported to Method Detection Limit (MDL)

Client Name: **HART**

 Work Order Number: **1904223**

Logged by:

 Date Received: **4/11/2019 4:17:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

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



Fremont
Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 4/11/19

Page: 1 of 1

Project Name: 601 Dexter

Project No: 1904223

Location: 601 Dexter

Collected by: J. Blanchette

Reports to (PM): Marissa Goodman

Email (PM): marissa.goodman@chartwaulser.com

Laboratory Project No (Internal): 1904223

Special Remarks:
naphthalene to MDL for CSE-1 & SW-1

Air samples are disposed of one week after report is submitted to client unless otherwise requested.
 OK to Dispose Hold (Fees may apply)

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal		Analysis							Comments	Internal Final Pressure ("Hg)			
						Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure ("Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15			Helium	Major Gases 3C	
CSE-1	12669	4/10/19	IA	6L	8hr	10mtorr	30" Hg	9" Hg										naphthalene to MDL	8
	FR8-02	1011	IA	6L	8hr	10mtorr	30" Hg	7" Hg	X									naphthalene to MDL	8
CSW-1	12667	4/10/19	IA	6L	8hr	10mtorr	30" Hg	1" Hg	X									naphthalene to MDL	8
	FR8-12	1010	IA	6L	8hr	10mtorr	30" Hg	1" Hg	X									naphthalene to MDL	8
SV-1	17240	4/9/19	S	6L	~30 min	4/3/2019	30" Hg	2" Hg	X										D
	17235	4/10/19	S	6L	~30 min	4/3/2019	30" Hg	2" Hg	X										D
SV-2	17235	4/10/19	S	6L	~30 min	4/3/2019	30" Hg	2" Hg	X										D
	17235	1150	S	6L	~30 min	4/3/2019	30" Hg	2" Hg	X										D

Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CVL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: *Jessica Blanchette* Date/Time: 4/11/19 16:17

Received: *Jessica Blanchette* Date/Time: 4/11/19 16:17

Relinquished: _____ Date/Time: _____

Received: _____ Date/Time: _____

Turn-Around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify) _____



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 4/11/19

Page: 1 of 1

Laboratory Project No (Internal): 1904223

Special Remarks:

*naphthalene to MDL for CSE-1 & SV-1
refer to email for VOC select list.*

edit: 4/11/2019

Air samples are disposed of one week after report is submitted to client unless otherwise requested.
 OK to Dispose Hold (fees may apply)

Client: Hart Crouser
 Address: 3131 Elliott Ave #600
 City, State, zip: Seattle, WA, 98121
 Telephone: 206-876-4221

Project Name: 601 Dexter
 Project No: 19049-00
 Location: 601 Dexter
 Collected by: J. Blanchette
 Reports to (PM): Marissa Goodman
 Email (PM): marissa.goodman@hartcrouser.com

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Initial		Field Initial		Analysis							Final Pressure (Hg)		
						Evacuation Pressure (mtorr)	Pressure (Hg)	Sample Pressure (Hg)	Final Sample Pressure (Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15		Helium	Major Gases 3C
CSE-1	12669	4/10/19	IA	6L	8hr	10mtorr	30"Hg	9"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
	FR8-02	1011	IA	6L	8hr	10mtorr	30"Hg	7"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
CSW-1	12667	4/10/19	IA	6L	8hr	10mtorr	30"Hg	1"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
	FR8-12	1010	IA	6L	8hr	10mtorr	30"Hg	1"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
SV-1	17240	4/9/19	S	6L	~30 min	10mtorr	30"Hg	1"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
	Flow Reg	1650	S	6L	~30 min	10mtorr	30"Hg	2"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
SV-2	17235	4/10/19	S	6L	~30 min	10mtorr	30"Hg	2"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8
	Flow Reg	1150	S	6L	~30 min	10mtorr	30"Hg	2"Hg	X	X	X	X	X	X	X	X	X	naphthalene to MDL	8

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Substlab / Soil Gas
 ** Container Codes: BV = 1 Liter Bottle Vac GL = 6L Canister IL = 1L Canister CTL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: *Jessica Blanchette* Date/Time: 4/11/19 16:17
 Received: *[Signature]* Date/Time: 4/11/19 16:17

Turn-Around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify)