Construction Completion Report

Uptown Flats Project

301 Queen Anne Avenue North and
300 First Avenue West
Seattle, Washington

Prepared for
GDCV Lower Queen Anne, LLC

May 1, 2017
19040-06

HARTCROWSER

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Contents

1.0 EXECUTIVE SUMMARY 1

2.0 INTRODUCTION 2
2.1 General Site Information 2
2.1.1 Contact Information 2
2.1.2 Property Description and Location 3
2.1.3 Geology and Hydrogeology 3
2.2 Site History 4
2.2.1 301 Queen Anne Avenue North 4
2.2.2 300 First Avenue West 4
2.2.3 314 First Avenue West 4
2.2.4 318 First Avenue West 4
2.3 Site Use 4

3.0 FIELD INVESTIGATIONS 5
3.1 Previous Environmental Investigations 5
3.2 Site Characterization 5
3.2.1 Environmental Contaminants of Concern 6
3.3 Soil Removal, Sampling, and Analytical Results 6
3.3.1 Evaluation of Remedial Alternatives 6
3.3.2 Summary of Completed Remedial Action 7

4.0 CONCEPTUAL SITE MODEL 9
4.1 Petroleum-Contaminated Soil 9
4.1.1 300 First Avenue West Parcel 9
4.1.2 Northeast Corner Off-Site Source 9
4.2 Fate and Transport Considerations 9
4.3 Pathways for Exposure 10
4.4 Potential Receptors 10

5.0 PROPOSED CLEANUP STANDARDS 10
5.1 Cleanup Levels 11
5.2 Terrestrial Ecological Evaluation 11

6.0 SUMMARY AND RECOMMENDATIONS 11
6.1 Compliance with MTCA Requirements 11
6.2 Request for No Further Action Determination 12

7.0 LIMITATIONS 12

8.0 REFERENCES 12

TABLES

1 Contact Information for Responsible Parties 2
2 MTCA Cleanup Levels 11
3 Sample Summary
4 Analytical Results for Characterization and Stockpile Soil Samples
5 Analytical Results for Verification Soil Samples
6 Summary of Impacted Soil Disposal Tonnage

FIGURES

1 Vicinity Map
2 Site Plan and Characterization and Verification Sample Locations
3 Generalized Subsurface Cross Section A-A'
4 TEE Exclusion–Undeveloped Land

APPENDIX A

Chemical Data Quality Review and Laboratory Reports

APPENDIX B

UST Decommissioning Documents

APPENDIX C

Boring Logs

Uptown Flats Project

301 Queen Anne Avenue North and 300 First Avenue West Seattle, Washington

1.0 EXECUTIVE SUMMARY

The Uptown Flats project (Site) is located at 301 Queen Anne Avenue North and 300 First Avenue West in Seattle, Washington (Figure 1). GDCV Lower Queen Anne, LLC is developing the property with a six-story building over the eastern portion of the Site and a seven-story building with one level of underground parking over the western portion.

Prior to construction, the Site contained an office building (constructed in 1963) and a building (constructed in 1976) housing the Elks Lodge. Surface parking which surrounded the two buildings occupied the remainder of the Site. Prior to these uses, the Site was primarily developed with single-family residences and apartments which reportedly used heating oil.

A Phase I environmental site assessment (Phase I) identified the following recognized environmental conditions (RECs) based on the historical use of the property: (1) the former apartment building at 306 First Avenue West reportedly had a 2,000-gallon underground storage tank (UST) for heating oil, assumed to be near the alley where the former boiler room was located, with no available documentation indicating the UST was removed when the building was demolished in the 1970s; and (2) a former dwelling at 318 First Avenue West reportedly used an oil burner, with no available documentation indicating a UST was removed when the building was demolished in the 1970s.

Six geotechnical borings were advanced on the Site prior to the current development, with two of the borings completed with monitoring wells. The soils were screened and there was no evidence of any environmental impacts (e.g. odors or staining). Nearby soil borings and environmental investigations previously conducted on the Site and on surrounding properties were reviewed, and there were no environmental impacts identified related to the borings or wells on the Site.

Since property redevelopment plans involved subsurface excavation and grading, off-site disposal of any discovered impacted soil was determined to be the most effective cleanup option. Proposed contingency activities were detailed in the site-specific draft Construction Contingency Plan (CCP, Hart Crowser 2016).

During redevelopment activities, a small area of total petroleum hydrocarbon (TPH) and naphthalene-contaminated soil above the Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use was found near the former apartment building boiler room, and a small hotspot of TPH-impacted soil was found at the northeast corner of the Uptown Flats property. Additionally, impacted soil containing low levels of TPH (below the MTCA Method A cleanup levels) were found associated with a former catch basin. A former residential heating oil UST was discovered and

decommissioned, but there were no associated TPH-impacts. Approximately 98 tons of TPH- and naphthalene-contaminated soils were removed and disposed of off-site at CEMEX. An additional 176 tons of low level TPH-impacted soils were removed and disposed of off-site to CEMEX.

The cleanup actions at the Site described in this report were completed in accordance with the CCP and all applicable MTCA requirements for remedial actions. Compliance with cleanup objectives for each of the potential exposure pathways (direct contact, soil to groundwater, and soil vapor) have been met, and are discussed in Section 6.1 (Compliance with MTCA Requirements). It is Hart Crowser's opinion that the Site does not pose a threat to human health or the environment and no further remedial actions are necessary. Therefore, GDCV Lower Queen Anne, LLC respectfully requests issuance of an unrestricted No Further Action (NFA) determination for the Site.

2.0 INTRODUCTION

On behalf of GDCV Lower Queen Anne, LLC, Hart Crowser oversaw environmental cleanup activities at the Site located at 301 Queen Anne Avenue North and 300 First Avenue West in Seattle, Washington (Figure 1). Our activities were completed during construction and redevelopment of the property. Remedial activities were completed as an independent cleanup per the Voluntary Cleanup Program (VCP) guidelines maintained by the Washington State Department of Ecology (Ecology), and in accordance with MTCA (Chapter 173-340 WAC) and the CCP dated February 17, 2016 (Hart Crowser 2016).

The locations of contaminated soil by total petroleum hydrocarbons as diesel (TPH-D), heavy oil (TPH-O), and naphthalene, the former UST, low level TPH-impacted soil, and soil characterization and verification samples collected during construction oversight are identified on Figure 2.

2.1 General Site Information

2.1.1 Contact Information

The following table summarizes contact information for project personnel.

Table 1 – Contact Information for Responsible Parties

Party	Address	Contact	Contact Numbers
Property Owner – GDCV Lower Queen Anne, LLC	221 Main Street, Suite 1280 San Francisco, CA 94105	Randy Ackerman	415-542-0992
Property Developer – Greystar	800 Fifth Avenue Seattle, WA 98104	Aaron Keeler	206-214-8307
Owner's Environmental Representative* (Hart Crowser) *OER	3131 Elliott Avenue, Suite 600 Seattle, WA 98121	Julie Wukelic Anne Conrad	206-324-9530 (main) 206-255-2852 (Julie's cell) 206-940-6728 (Anne's cell) 206-328-5581 (FAX)

2.1.2 Property Description and Location

The Site is located in the Lower Queen Anne neighborhood in Seattle, Washington, which is north of downtown Seattle (Figure 1). The Site is at 301 Queen Anne Avenue North and 300 First Avenue West, comprises four King County tax parcels (1989201095, 1989201090, 1989201080, and 1989201070), and is approximately 36,000 square feet (0.83 acres) in area. The Site is L-shaped, and occupies the southern two-thirds of the west side and the southern one-sixth of the east side of the block bounded by West Harrison Street to the north, Queen Anne Avenue North to the east, West Thomas Street to the south, and First Avenue West to the west. The center of the Site is approximately located at latitude 47.621 North and longitude 122.358 West and is in the southeast quarter of Section 25 in Township 25 North, Range 3 East.

2.1.3 Geology and Hydrogeology

The Seattle area is located within the Puget Sound lowland, characterized by north–south ridges capped by Vashon till. The Queen Anne Hill neighborhood is one of the north–south ridges, located north of the downtown Seattle core business district. Our understanding of the geology and hydrogeology of the Site is based on investigations conducted by Hart Crowser and others on the property and adjacent sites.

Soils on the Site can be broadly classified into three soil units. The Fill unit generally extends between 1 to 8 feet below ground surface (bgs) at the Site. The Fill consists predominantly of loose to medium dense slightly silty to silty sand and medium stiff very sandy silt. Below the Fill are layers of medium dense to very dense slightly silty to very silty sand and very stiff to hard slightly sandy to very sandy silt. The silty sand and sandy silt ranges from approximately 5 to 26 feet thick. Below the silty sand and sandy silt is stiff to hard clay. The top of this layer was encountered between approximately 10 to 28 feet bgs, and extended to the bottom of all geotechnical borings advanced on the Site (up to 61.5 feet bgs) (Hart Crowser 2015; Appendix C).

The regional groundwater table was not encountered in the geotechnical borings down to 61.5 feet bgs. However, perched groundwater was noted in several borings on and near the Site. Two monitoring wells were installed on the Site (HC-102 and HC-104) and screened across the perched groundwater elevations, which were observed at approximately 20 and 5 feet bgs, respectively. Groundwater was irregularly distributed in the soils overlying the low permeability clay, and was generally observed at elevation 80 feet (referenced to the North American Vertical Datum of 1988 [NAVD88]), though slightly elevated perched groundwater levels were present at the northeast corner (Hart Crowser 2015). Site-wide dewatering did not occur due to the low permeability of the soils containing perched groundwater.

The Site is on a slope with an approximate 10 percent downward grade toward the southwest. Elevations across the Site range between 81 and 107 feet (NAVD88). The surrounding area topography slopes down to the west and southwest toward Elliott Bay, which is located approximately 0.2 miles southwest of the Site. Based on surrounding area topography and perched groundwater elevations, groundwater is likely to flow to the west/southwest, toward Elliott Bay.

2.2 Site History

The Site was vacant or occupied by dwellings or apartments from the late 1890s to the 1960s. Commercial buildings were constructed at 314 First Avenue West in 1963 and at 301 Queen Anne Avenue North in 1976. The dwellings and houses occupying the 300 and 318 First Avenue West addresses were demolished in the 1980s and the parcels were used for parking lots.

2.2.1 301 Queen Anne Avenue North

A dwelling was located on this property from 1893 to 1917. By 1950, the buildings were removed, but private automobile garages were present along the alley. In 1976, the former building was constructed. The building was a restaurant until 1993, when it was purchased by the Elks and used as a lodge until the present time. A cake decorating business was listed at the premises from 2008 to 2013. The Elks building was demolished as part of the current redevelopment.

2.2.2 300 First Avenue West

The land was undeveloped from 1893 to 1917. An apartment building was constructed in 1924, and was addressed 306 First Avenue West. The building was heated with a hot water boiler, and used a 2,000-gallon fuel tank for the oil burner. A boiler room was located next to the alley. The apartment building was demolished in the 1970s, and the property was since used for parking. The Seattle Elks purchased the property in 1993.

2.2.3 314 First Avenue West

Dwellings and flats were on this property from 1893 to 1950. In 1963, a building was constructed on the west side of the tax parcel, with parking on the east side. Commercial businesses and offices occupied this building from 1966 to the present. The property was purchased by the Washington State Labor Council (WSLC) in 1990. The WSLC building was demolished as part of the current redevelopment.

2.2.4 318 First Avenue West

This property was undeveloped from 1893 to 1905. Dwellings were constructed in the early 1900s, and remained on the property through the mid-1970s. A house constructed in 1906 was heated with an oil burner. A cabinet shop was constructed near the alley by the 1960s. By 1985, all buildings were demolished, and the property was a paved parking lot, and has been used for parking since that time. The Seattle Elks purchased the property in 1993.

2.3 Site Use

GDCV Lower Queen Anne, LLC is redeveloping the Site by constructing a six-story building over the eastern portion of the Site and a seven-story building with one level of underground parking over the western portion. The finish floor elevation of the bottom of the east building is at about 95 feet (NAVD88), and the underground parking garage below the western building has a finish floor of approximately 76 feet (NAVD88). The new buildings will house apartments and live/work units. The Site is currently zoned as neighborhood commercial.

3.0 FIELD INVESTIGATIONS

3.1 Previous Environmental Investigations

A Phase I was conducted on the Site in 2014, and the report identified RECs based on historical uses (Hart Crowser 2014b). The former apartment building at 306 First Avenue West had a 2,000-gallon UST for heating oil. Building plans showed a boiler room near the alley and the Phase I assumed the UST would be found in or near the alley. There was no available documentation indicating that the UST was removed when the building was demolished in the 1970s. The former dwelling at 318 First Avenue West was heated with an oil burner, but there was no available documentation indicating that a UST was removed when the building was demolished in the 1970s. The Phase I noted that geotechnical borings close to these locations did not indicate any evidence of environmental impacts.

The Phase I recommended developing a CCP to manage any potential environmental impacts during redevelopment. The Phase I also identified potential asbestos-containing material (ACM). Based on the age of the buildings, lead-based paint (LBP) may have also been used. The Phase I recommended conducting a full hazardous building material (HBM) survey prior to building demolition.

A Phase II environmental investigation in 2014 included a ground penetrating radar (GPR) survey and a limited HBM survey (Hart Crowser 2014a). A GPR survey was conducted in the eastern portion of the 318 First Avenue West parcel and the southeastern portion of the 300 First Avenue West parcel, where building plans indicated USTs had previously been located (Figure 2). The GPR surveys looked for anomalies up to 7 feet bgs, but no anomalies were observed that were consistent with USTs or structures. To confirm the GPR surveys, the length of the alley along the property line was subsequently surveyed with a metal detector, but no large anomalies were observed. A limited HBM survey was conducted on the 314 First Avenue West and 301 Queen Anne Avenue North parcels. A visual inspection of both buildings identified several potential ACMs, LBP, fluorescent light tubes, and possible polychlorinated biphenyl (PCB)-containing light fixtures. Six samples were collected from the 314 First Avenue West building for asbestos analysis, two of which had detected concentrations of asbestos. Two samples were collected from the 301 Queen Anne Avenue North building for asbestos analysis, and both were below the laboratory reporting limit. A full HBM abatement was conducted in December 2015 prior to building demolition.

Geotechnical investigations on the Site included advancing six borings, and completing two borings as monitoring wells (Hart Crowser 2015). The soils were screened and there was no evidence of any environmental impacts (e.g. odors or staining). No regional groundwater was encountered during any of the subsurface investigations.

3.2 Site Characterization

Analytical results for characterization soil samples are found in Table 4, and sample locations are identified on Figure 2. No groundwater characterization samples were collected because: (1) there were no potential environmental concerns identified during either the Phase II environmental

investigation or during the geotechnical investigation; (2) regional groundwater was not found in the geotechnical borings to depths of 61.5 feet bgs; and (3) perched groundwater was discontinuous.

3.2.1 Environmental Contaminants of Concern

Based on soil sampling and analysis conducted during construction and redevelopment, the environmental contaminants of concern (COCs) at the Site were identified as:

- **Soil.** Diesel-range TPH (TPH-D), heavy oil-range TPH (TPH-O), and naphthalene.
- **Groundwater.** None.
- **Vapor.** None.

Overall, the extent of the TPH and naphthalene releases to the soil were limited and isolated. Also, the naphthalene detections were related to the TPH releases. The removal actions were successful in removing contaminated soil above the MTCA Method A cleanup levels for unrestricted land use (CULs) throughout the Site, as shown by the verification soil sample analytical results.

Groundwater was not considered a pathway of concern for multiple reasons. Regional groundwater was not encountered to depths of 61.5 feet bgs (elevation 43.5 feet) as observed in the geotechnical borings. Perched groundwater was noted in only five of the thirteen geotechnical borings advanced on the block, at elevations ranging from 74 to 86.4feet, indicating that the perched groundwater was discontinuous and does not represent a current or potential future source of drinking water. No construction dewatering was necessary during construction to depths of 61.5 feet bgs through the elevations of previously observed perched groundwater pockets. The COCs were diesel and heavy oil, which are less likely to migrate through soil. Soil verification samples collected beneath the areas of TPH-contaminated and TPH-impacted soils were below laboratory reporting limits for relevant COCs, with no indication that contamination had migrated to the perched groundwater. The Site is not within a 10-year wellhead protection area of a public water supply well, or within 1,000 feet of a public or private water supply well, or within 300 feet of Elliott Bay, the nearest surface water.

Vapor was not considered a pathway of concern as the only volatile COC (naphthalene) was found at only one location on the Site and was completely removed during excavation activities, as shown by verification sample results.

3.3 Soil Removal, Sampling, and Analytical Results

During redevelopment, isolated areas of contaminated and impacted soil were discovered. The remedial action of excavation and off-site disposal of the contaminated and impacted soil was conducted at the Site from March to April 2016. The following sections summarize how the remedial alternative was selected, the location of excavated impacted soil, and the verification sample analytical results. The quality of the data is reviewed in Appendix A.

3.3.1 Evaluation of Remedial Alternatives

A Phase I investigation on the Site identified the potential presence of a former UST. However, a Phase II investigation and a geotechnical investigation did not find a UST or any evidence of obvious or

known environmental issues. Since property redevelopment plans involved subsurface excavation and grading, off-site disposal of any discovered contaminated or impacted soil was determined to be the most effective cleanup option, if needed. This cleanup option was selected because:

- The planned redevelopment included subsurface excavation;
- Removing any potentially impacted soil would be a permanent solution; and
- This option would be cost-effective, since any necessary cleanup would occur during development.

3.3.2 Summary of Completed Remedial Action

Remedial activities were conducted at the Site from March to April 2016. This section summarizes the remedial action and provides a brief description of when the action occurred, what was performed, and the results.

Hart Crowser provided environmental construction oversight from March to April 2016. Acting as a representative of the owner, Hart Crowser field representatives observed, screened, and characterized potentially contaminated or impacted soil, as appropriate, and assisted with the off-site disposal of contaminated or impacted soil when encountered.

Field screening consisted of sampling soil vapors with a photoionization detector (PID), conducting sheen tests, and visually observing soil to identify and segregate potentially impacted soil. Soil sampling and laboratory analysis characterized contaminated or impacted soil for appropriate disposal, and verified that the soil remaining in place did not exceed applicable CULs. Field reports were completed to document activities observed, conditions encountered, and samples collected. Sample analytical results were submitted to the contractors to coordinate disposal profiling.

The contaminated and impacted soils were located at the southeastern area and the northeast corner of the Site. Most of the soils were impacted and did not contain COCs above the applicable CULs. The amount of contaminated soil with COCs above CULs was small and isolated, and those soils were fully removed throughout the Site during excavation.

The petroleum-contaminated soil (PCS) removed from the Site includes commingled soil with concentrations of petroleum-related compounds both above and below MTCA Method A soil cleanup levels for unrestricted land use. It was determined that any soil that exhibited any physical evidence of environmental impacts (e.g. odors, staining) or contained low concentrations of COCs would also be removed and disposed of off-site. Approximately 275 tons of PCS was removed from the Site. A summary of off-site soil disposal tonnage is provided in Table 6.

3.3.2.1 Impacted Soil Removal and Sample Results

Within the footprint of the planned buildings and underground parking garage, the depth of the excavation ranged from approximately 3 to 31 feet bgs. Excavation within the development area removed all of the known contaminated and impacted soil on and beneath the Site.

The isolated impacted areas are described in detail below. The approximate area from which the contaminated and impacted soils were removed is shown on Figures 2 and 3. During the cleanup, 47

soil samples were collected and analyzed—11 of those were stockpile samples, and 28 were characterization samples, including samples that were above and below CULs. The remaining 8 samples were verification samples collected from the excavation limits of the Site. Analytical results confirmed the final vertical and lateral limits of the excavation in the impacted area. Characterization and verification soil sample analytical results are presented in Tables 4 and 5, respectively.

Southeastern Area. TPH and naphthalene concentrations in soil exceeded CULs primarily at depths between approximately 0 to 4 feet bgs. After this small area was excavated and stockpiled, the surrounding area was field screened and additional soil verification samples were collected and analyzed from excavation sidewalls and beneath the impacted area. All previous soil samples that indicated TPH and naphthalene exceedances above CULs were excavated and disposed, along with any soils with observed petroleum impacts. The soil verification sample analytical results show that all soil remaining on the Site is below CULs for TPH and naphthalene (Figure 2).

Northeast Corner. TPH-D was found above the CUL in one soil sample in an isolated hotspot at the northeast property boundary at a depth of 10 feet bgs. No petroleum impacts extended into the Uptown Flats property after excavation was complete. It is believed the source of this now-removed hotspot is from an off-property source along the alley at the highest elevation of the property. After this area was excavated and stockpiled, the surrounding area was field screened and soil verification samples were collected and analyzed from excavation sidewalls and below the impacted area. The soil verification sample analytical results show that all contaminated and impacted soil was removed from within the Uptown Flats property boundary and that applicable CULs were met (Figure 3). A thin layer of residual petroleum impacted soil appears to be located beyond the property boundary below the alley at 10 feet bgs. Excavation extending into the adjacent alley owned and operated by the City of Seattle was not feasible or practicable due to access constraints and concern for the structural integrity of the surrounding area.

Unknown UST. One previously unknown (though suspected) UST was encountered during construction activities. The unknown UST was encountered approximately 40 feet west and 13 feet south of the northeast corner of the property, at depths of 3 to 6 feet bgs. The UST was identified as an unregulated 300-gallon heating oil tank and was decommissioned and removed on March 17, 2016. It was assumed to be a diesel heating oil UST due to the previous residential use of the Property. Marine Vacuum Services triple rinsed the UST, and a marine chemist and Fire Marshall were on site to observe the UST removal.

Residual petroleum-impacted soil from the UST area, which was below the CULs, was over-excavated, stockpiled, and removed and disposed of off-site. Characterization samples were collected from the sidewalls and bottom of the over-excavated area for chemical analysis and analytical results. All soil samples were below applicable CULs. UST removal documentation can be found in Appendix B.

Former Catch Basin. Soils containing petroleum impacts were discovered adjacent to a former catch basin on the 314 First Avenue West parcel. Samples of the residual petroleum-impacted soil from the catch basin area were below applicable CULs. The impacted soils were over-excavated, stockpiled, and

removed and disposed of off-site. Characterization samples were collected from the sidewalls and bottom of the over-excavated area for chemical analysis, with analytical results below applicable CULs.

4.0 CONCEPTUAL SITE MODEL

This section presents the conceptual site model for the Site. A discussion of the chemicals and media of concern, the fate and transport characteristics of the release of COCs, the potential exposure pathways, and the potential receptors are included in this section. This section provides a conceptual understanding of the Site that is based on the results of historical research and final remedial actions performed at the Site.

4.1 Petroleum-Contaminated Soil

4.1.1 300 First Avenue West Parcel

TPH-D, TPH-O, and Naphthalene Impacted Soils. TPH-D, TPH-O, and naphthalene-contaminated soil was found and located in the southeastern portion of the 300 First Avenue West parcel. Figure 2 shows the approximate distribution. The contaminated soil was identified at a depth of approximately two to four feet bgs. The source was not identified, but the affected area was near the boiler room of the former apartment building. While no heating oil UST was discovered during the redevelopment activities, the petroleum-contaminated soil may have been related (via overfill or release) to the former UST on this parcel.

4.1.2 Northeast Corner Off-Site Source

An isolated hotspot of TPH-D contaminated soil was identified at a concentration greater than the MTCA Method A CUL at 10 feet bgs at one location in the northeast corner of the Uptown Flats property. Based on field observations and results from other samples collected in this area, this isolated detection arises from an off-property source. Based on topography and the lack of evidence of petroleum impacts from the discovered UST, the source of TPH-D-impacted soil at the northeast corner of the property was likely from an off-site source in the alley or beyond. We were verbally informed by the adjoining site contractor that petroleum impacts were found in the alley right-of-way.

4.2 Fate and Transport Considerations

Petroleum and naphthalene impacts were associated primarily with soil near the former boiler room at 300 First Avenue West at approximate depths between two to four feet bgs. These soils were fully excavated and removed from the Site during redevelopment. Field screening and verification soil samples collected from beneath the impacted materials and from the sidewalls of the excavation confirmed that all contaminated and impacted soil was removed from the Site and that applicable CULs were met.

TPH-D was also found in an isolated hotspot believed to be from an off-site source near the alley in the northeast corner of the property, at a depth of 10 feet bgs. Field screening and verification soil samples collected from beneath the former hotspot location and from the sidewalls of the excavation confirmed that the contaminated soil was fully removed from within the property boundary and that

applicable CULs were met. A thin layer of residual petroleum impacted soil may exist beyond the east wall of the property boundary at 10 feet bgs. Further excavation within the City of Seattle's right-of-way was not feasible or practicable due to access constraints and structural concerns.

All contaminated and impacted soils were removed from within the property boundary. Based on the verification sample results and our observations that any residual petroleum soil impacts are located outside of the property boundary, the Site presents no risk to human health and the environment.

4.3 Pathways for Exposure

Direct Contact Pathway. All contaminated and impacted soil within the property boundary has been removed. The direct contact exposure pathway for the Site has been eliminated.

Verification soil samples collected and analyzed following soil excavation were below applicable CULs. In addition, the Site plans include construction of an underground parking garage (with associated air exchange and venting) and new buildings on top of concrete foundation throughout the Site. These data results and construction site features indicate that direct contact is no longer a complete exposure pathway.

Soil to Groundwater Pathway. All contaminated and impacted soils were removed and disposed off-site. Soil sample analysis confirms that all contaminated and impacted soils were successfully remediated, and that the remaining soil on the property no longer poses a risk to groundwater quality. Additionally, there was at least 50 feet between the deepest impacted soil discovered and the anticipated regional groundwater table. The soil to groundwater exposure pathway for the Site has been eliminated.

Soil Vapor Pathway. Minimal volatile contamination was detected—specifically, only the naphthalene-impacted soil in the southeast area of the Site. Since all volatile contamination has been successfully excavated and removed from the Site, and since the verification soil samples collected and analyzed following impacted soil removal were below applicable CULs for soil, the soil vapor pathway is not a potential exposure pathway.

4.4 Potential Receptors

As all pathways for exposure have been eliminated, there are no potential receptors.

Following the removal and disposal of TPH- and naphthalene-impacted soil during construction activities and based on field observations and verification soil sample analytical results, we believe current site conditions satisfy all MTCA Method A cleanup requirements for protectiveness of human health and the environment.

5.0 PROPOSED CLEANUP STANDARDS

Cleanup standards involve CULs and points of compliance, as described in WAC 173-340-700 through WAC 173-340-760. Cleanup standards must also incorporate other state and federal regulatory

requirements applicable to the cleanup action and/or its location, as appropriate. The following section summarizes current applicable cleanup standards for the Site.

5.1 Cleanup Levels

Table 2 summarizes the current CULs selected for the Site COCs.

Table 2 – MTCA Cleanup Levels

Medium	Chemicals of Concern in mg/kg		
	TPH-D	TPH-O	Naphthalene
Soil [a]	2,000	2,000	5

Notes:

a. MTCA Method A cleanup level.

5.2 Terrestrial Ecological Evaluation

The Site qualified for an exclusion from a terrestrial ecological evaluation (TEE) because there is less than 1.5 acres of contiguous undeveloped land on the Site, or within 500 feet of any area of the Site. Figure 4 identifies the Site and its 500-foot radius to demonstrate that this exclusion is valid.

Per WAC 173-340-7490(4)(b) and WAC 173-340-7491 (1)(b and d), since the majority of the property has been covered by buildings and asphalt pavement, the property is excluded from requirements to conduct a TEE**.** In addition, before construction, the site did not provide valuable habitat for ecological receptors under MTCA. This remains true for the current redevelopment.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Compliance with MTCA Requirements

It is Hart Crowser's opinion that cleanup actions conducted on the Site comply with the substantive requirements of MTCA and are fully protective of all potential exposure pathways. Compliance with cleanup objectives for each of the potential exposure pathways (direct contact, soil to groundwater, and soil vapor) have been met as discussed in Section 4.3 (Pathways for Exposure).

The Site has been characterized in a manner consistent with the substantive requirements of MTCA, and performance and verification sampling indicates compliance with CULs throughout the Site.

Approximately 98 tons of TPH- and naphthalene-contaminated soils were removed and disposed of off-site at CEMEX, and an additional 176 tons of low level TPH-impacted soil was removed and disposed of off-site to CEMEX. Based on verification soil sample analytical results collected following impacted soil removal, concentrations of COCs in soil remaining beneath the property are all below CULs.

The remedial action conducted on the Site should be considered final under WAC 173-340-350 through -390. It is Hart Crowser's opinion that the Site no longer poses a threat to human health or the

environment and no further remedial actions are necessary. This closure report demonstrates confirmative analytical results, which show removal of all impacted soils at concentrations exceeding the CULs.

6.2 Request for No Further Action Determination

Based on the work conducted on the Site and the confirmative analytical results obtained following remedial actions, the Site is fully compliant with MTCA Method A cleanup standards and no longer poses a threat to human health and the environment. Therefore, GDCV Lower Queen Anne, LLC respectfully requests issuance an unrestricted NFA determination for the Site.

7.0 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 by GDCV Lower Queen Anne, LLC, for specific application to the subject property, subject to its understanding that in so doing, they are bound by the limitations, terms and conditions of the This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

8.0 REFERENCES

Hart Crowser, Inc. 2014a. Ground Penetrating Radar (GPR) Survey and Limited Hazardous Building Material (HBM) Surveys, First and Thomas Property, 300 to 318 First Avenue West and 301 Queen Anne Avenue North. Prepared for Greystar GP II, LLC, June 20, 2014.

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Table 3 - Sample Summary

Sample ID	Collection Date	Location of Sample	Approximate Feet Below Ground Surface	Approximate Elevation in Feet	Description	Matrix	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Metals[a]	PCBs	PAHs	pH	% Moisture	Hold	Lab Report No.
1	1/27/2016	Elks footprint	1 to 2	104 to 105	CC	S		X	X	X			X	X		C60128-1
2	1/27/2016	Elks footprint	1 to 2	96 to 97	CC	S		X	X	X			X	X		C60128-1
3	1/27/2016	WSLC footprint	1 to 2	88 to 89	CC	S		X	X	X			X	X		C60128-1
UF-S1	3/2/2016	WSLC footprint	3 to 4	86 to 87	CC	S				X			X	X		C60303-2
UF-UST-SW-W	3/17/2016	E2 x N10	4	101	C	S			X					X		C60317-2
UF-UST-SW-S	3/17/2016	E2 x N10	4	101	C	S			X					X		C60317-2
UF-UST-SW-N	3/17/2016	E2 x N10	4	101	C	S			X					X		C60317-2
UF-UST-SW-E	3/17/2016	E2 x N10	4	101	C	S			X					X		C60317-2
UF-UST-B	3/17/2016	E2 x N10	6	99	C/CC	S			X	X			X	X		C60317-2
UF-CB-SW-W	3/17/2016	E9 x N9.5	6	96	C	S			X					X		C60317-2
UF-CB-SW-S	3/17/2016	E9.5 x N10	5	97	C	S			X					X		C60317-2
UF-CB-SW-E	3/17/2016	E9 x N11.5	6	96	C	S			X					X		C60317-2
UF-CB-SW-N	3/17/2016	E8 x N10	6	96	C	S			X					X		C60317-2
UF-CB-B	3/17/2016	E9 x N10	6	96	C/CC	S			X	X			X	X		C60317-2
UF-SP-1	3/17/2016				SP	S			X					X		C60317-2
UF-SP-2	3/17/2016				SP	S			X					X		C60317-2
UF-SP-3	3/17/2016				SP	S			X					X		C60317-2
UF-UST-SP	3/17/2016				SP	S			X					X		C60317-2
UF-S4	3/16/2016	North end	2 to 3	92 to 94	CC	S				X			X	X		C60317-2
UF-S5	3/17/2016	North-central	4 to 8		SP	S				X			X	X		C60317-2
UF-E24-S6	3/22/2016	E24 soldier pile	4 to 8	88 to 92	CC	S				X			X	X		1603266
UF-S10-S7	3/24/2016	S10 soldier pile	4 to 8	78 to 82	CC	S				X			X	X		1603266
UF-S8	3/24/2016	35' E of W13	0 to 4	95 to 99	CC	S				X			X	X		1603266
UF-S9	3/24/2016	25' E of W16	4 to 8	82 to 86	CC	S				X			X	X		1603266
UF-S10	3/24/2015	30' W of E8	8 to 12	89 to 93	CC	S				X			X	X		1603266
UF-S11	3/25/2016	Elks footprint	1 to 4	96 to 99	CC	S				X			X	X		1603285
UF-S12	3/25/2016	Elks footprint	1 to 4	90 to 93	CC	S				X			X	X		1603285
UF-CW	3/25/2016	55' E of E10	11	91	C	S			X					X		1603286
UF-CS	3/25/2016	45' E of E11	1	101	C	S			X					X		1603286
UF-CE	3/25/2016	35' E of E10	1	101	C	S			X					X		1603286
UF-CN	3/25/2016	45' E of E9	1	101	C	S			X					X		1603286
UF-CB	3/25/2016	45' E of E10	2	100	C/CC	S			X	X			X	X		1603286
UF-N1-U	3/31/2016	N1			CC	S									X	
UF-N1-L	3/31/2016	N1			CC	S									X	

Table 3 - Sample Summary

Sample ID	Collection Date	Location of Sample	Approximate Feet Below Ground Surface	Approximate Elevation in Feet	Description	Matrix	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Metals[a]	PCBs	PAHs	pH	% Moisture	Hold	Lab Report No.
UF-N1	3/31/2016	N1			CC	S									X	
UF-N2-L	3/31/2016	N2			CC	S									X	
UF-N2	3/31/2016	N2			CC	S									X	
UF-N3-U	3/31/2016	N3			CC	S									X	
UF-N3-L	3/31/2016	N3			CC	S									X	
UF-N3	3/31/2016	N3			CC	S									X	
UF-NC1-U	3/31/2016	NC1			CC	S									X	
UF-NC1-L	3/31/2016	NC1			CC	S									X	
UF-NC1	3/31/2016	NC1			CC	S									X	
UF-NC2-L	3/31/2016	NC2			CC	S									X	
UF-NC2	3/31/2016	NC2			CC	S									X	
UF-NC3-U	3/31/2016	NC3			CC	S									X	
UF-NC3-L	3/31/2016	NC3			CC	S									X	
UF-NC3	3/31/2016	NC3			CC	S									X	
UF-SC3-U	3/31/2016	SC3			CC	S									X	
UF-SC3-L	3/31/2016	SC3			CC	S									X	
UF-SC3	3/31/2016	SC3			CC	S									X	
UF-S3-U	3/31/2016	S3			CC	S									X	
UF-S3-L	3/31/2016	S3			CC	S									X	
UF-S3	3/31/2016	S3			CC	S									X	
UF-D	4/6/2016	48'W of E24			CC	S									X	C60407-1
UF-E-SP1	4/6/2016				SP	S	X		**X**					X		C60407-1
UF-E-SP2	4/6/2016				SP	S	X		**X**					X		C60407-1
UF-E-SP3	4/6/2016				SP	S	X		**X**		X	**X**		X		C60407-1
UF-D-SP1	4/8/2016				SP	S			X					X		C60408-2
UF-D-SP2	4/8/2016				SP	S			X					X		C60408-2
UF-D-SP3	4/8/2016				SP	S			X					X		C60408-2
UF-D-N	4/8/2016	28' W of E22		89	V	S			X			X		X		C60408-2
UF-D-E	4/8/2016	22' W of E23		89	V	S			X			X		X		C60408-2
UF-D-S	4/8/2016	40'W of E26	5	86	V	S			X			X		X		C60408-2
UF-D-W	4/8/2016	50'W of E23.5	5	86	V	S			X			X		X		C60408-2
UF-D-B	4/8/2016	composite of 26' W of E23 and 46' W of E24.5		87	V	S			X			X		X		C60408-2
UF-F-SP1	4/13/2016				SP	S									X	

Table 3 - Sample Summary

Sample ID	Collection Date	Location of Sample	Approximate Feet Below Ground Surface	Approximate Elevation in Feet	Description	Matrix	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Metals[a]	PCBs	PAHs	pH	% Moisture	Hold	Lab Report No.
UF-F-SP2	4/13/2016				SP	S									X	
UF-F-SP3	4/13/2016				SP	S									X	
UF-F-SW-S	4/13/2016	E1.5	9	96	V	S			X					X		C60414-1
UF-F-SW-E	4/13/2016	E0.5	9 to 11	93-96	C	S			**X**					X		C60414-1
UF-F-B	4/13/2016	E0.5	11	93	V	S			X					X		C60415-2
UF-F-SW-N	4/15/2016	11' N of E1	10	95	V	S			X					X		C60415-2

Bold entries are above MTCA cleanup levels.

Notes:
b. Metals analysis includes Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn
C = characterization
S = soil
SP = stockpile
V = verification
CC = characterization for clean soil disposal

Table 4 - Analytical Results for Characterization and Stockpile Soil Samples

Sample ID	MTCA	#1	#2	#3	UF-UST-SW-W	UF-UST-SW-S	UF-UST-SW-N	UF-UST-SW-E	UF-UST-B	UF-CB-SW-W	UF-CB-SW-S	UF-CB-SW-E	UF-CB-SW-N	UF-CB-B	UF-CB	UF-CE
Sampling Date	Method A	1/27/2016	1/27/2016	1/27/2016	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	3/25/2016	3/25/2016
Elevation in Feet (Approx.)	Cleanup Level[a]	104 to 105	96 to 97	88 to 89	101	101	101	101	99	96	97	96	96	96	100	101
pH		**5.6** J	**5.6** J	**5.7** J					**6.8** J					**6.9** J	**7.34** J	
Moisture in %		**14%**	**16%**	**10%**	**18%**	**16%**	**16%**	**20%**	**13%**	**12%**	**13%**	**12%**	**12%**	**14%**	**10.3%**	**12.0%**
TPH in mg/kg																
Kerosene/Jet fuel	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		
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	22.3 U	22.3 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	55.7 U	55.7 U
NWTPH-Gx in mg/kg																
Mineral spirits/Stoddard	30/100[b]	5.0 U	5.0 U	5.0 U												
Gasoline	30/100[b]	5.0 U	5.0 U	5.0 U												
BTEX 8021B in µg/kg																
Benzene	30															
Toluene	7000															
Ethylbenzene	6000															
Xylenes	9000															
Metals in mg/kg																
Silver		**7.3**	**6.49**	**5.54**					**12.6**					**6.74**	0.0845 U	
Arsenic	20	**3.49**	**3.08**	**2.13**					**3.83**					**2.28**	**2.05**	
Beryllium		0.0179 UJ	0.209 U	0.015 U					0.112 U					0.0891 U	0.169 U	
Cadmium	2	0.08934 U	0.1045 U	0.0789 U					0.112 U					0.08907 U	0.169 U	
Chromium	19/2000[c]	**20.1**	**14.7**	**12.1**					**41.8**					**10.9**	29.4	
Copper		**16.1**	**14.7**	**12.3**					**34.4**					**15.2**	**10.8**	
Mercury	2	0.179 U	0.209 U	0.157 U					**0.0501**					**0.0238**	0.199 U	
Nickel		**28.5**	**30.4**	**27.9**					**112**					**34.1**	**29.6**	
Lead	250	**36.5**	**17.7**	**72.4**					**14.4**					**9.9**	**1.67**	
Antimony		1.07 U	1.25 U	0.95 U					0.0563 U					0.0442 U	0.169 U	
Selenium		0.72 U	0.83 U	0.63 U					**0.117**					**0.0977**	**0.656**	
Thallium		0.179 U	0.209 U	0.157 U					**0.0639**					**0.0578**	0.169 U	
Zinc		**56.6 J**	**35.8**	**32.3**					**50.1**					**31.6**	**24.7**	
Chromium, Hexavalent	19															
PAH (8270 sim) in mg/kg																
1-Methylnaphthalene																
2-Methylnaphthalene																
Naphthalene																
Total Naphthalenes	5															
Acenaphthylene																
Acenaphthene																
Fluorene																
Phenanthrene																
Anthracene																
Fluoranthene																
Pyrene																
Benzo(a)anthracene																
Chrysene																
Benzo(b)fluoranthene																
Benzo(k)fluoranthene																
Benzo(a)pyrene	0.1															
Indeno(1,2,3-cd)pyrene																
Dibenzo(ah)anthracene																
Benzo(ghi)perylene																
cPAH TEQ	0.1															
8082 (PCBs) in mg/kg																
A1221																
A1232																
A1242 (A1016)																
A1248																
A1254																
A1260																
Total PCBs	1															

Table 4 - Analytical Results for Characterization and Stockpile Soil Samples

Sample ID	MTCA	UF-CN	UF-CS	UF-CW	UF-S1	UF-SP-1	UF-SP-2	UF-SP-3	UF-UST-SP	UF-S4	UF-S5	UF-E24-S6	UF-S10	UF-S10-S7	UF-S8	UF-S9	UF-S11
Sampling Date	Method A	3/25/2016	3/25/2016	3/25/2016	3/2/2016	03/17/16	03/17/16	03/17/16	03/17/16	03/16/16	03/17/16	3/22/2016	3/24/2016	3/24/2016	3/24/2016	3/24/2016	3/25/2016
Elevation in Feet (Approx.)	Cleanup Level[a]	101	101	91	86 to 87					92 to 94		88 to 92	89 to 93	78 to 82	95 to 99	82 to 86	96 to 99
pH					**6.6** J					**6.9** J	**7.0** J	**7.15** J	**8.69** J	**7.95**	**7.85**	**7.95**	**6.47** J
Moisture in %		**19.5%**	**8.18%**	**9.24%**	**12%**	**13%**	**13%**	**12%**	**14%**	**14%**	**13%**	**15.5%**	**23.5%**	**9.28%**	**12.4%**	**8.45%**	**15.2%**
TPH in mg/kg																	
Kerosene/Jet fuel	2000					20 U	20 U	20 U	20 U								
Diesel/Fuel oil	2000	24.5 U	21.6 U	21.2 U		**580**	**360**	**1,700**	20 U								
Heavy oil	2000	61.3 U	53.9 U	53.1 U		50 U	50 U	50 U	50 U								
NWTPH-Gx in mg/kg																	
Mineral spirits/Stoddard	30/100[b]																
Gasoline	30/100[b]																
BTEX 8021B in µg/kg																	
Benzene	30																
Toluene	7000																
Ethylbenzene	6000																
Xylenes	9000																
Metals in mg/kg																	
Silver					**5.66**					**9.8**	**9.71**	0.0904 U	0.0998 U	0.0835 U	0.0816 U	0.0809 U	0.0861 U
Arsenic	20				**1.42** J					**2.74**	**3.25**	**4.53**	**4.22**	**1.59**	**1.96**	**1.54**	**4.21**
Beryllium					**0.292**					0.129 U	0.117 U	**0.353**	**0.511**	0.167 U	0.163 U	0.162 U	**0.227**
Cadmium	2				0.02765 U					0.129 U	0.117 U	0.181 U	0.203	0.167 U	0.163 U	0.162 U	0.172 U
Chromium	19/2000[c]				**10.4** J					**14.2**	**15.6**	**37.6**	**69.1**	23.6	20.9	19.7	**32.5**
Copper					**10.5** J					**19.2**	**21.5**	**25.1**	**46.3**	**11.7**	**9.84**	**8.36**	**16.5**
Mercury	2				**0.0136**					**0.0307**	**0.0245**	**0.0277** T	**0.0524** T	**0.00992** T	**0.00743** T	**0.00883** T	0.2 U
Nickel					**25.5**					**37**	**26.3**	**52.8**	**87.4**	**37**	**32.1**	**31.3**	**33.2**
Lead	250				**11.2**					**20.5**	**20.3**	**3.67**	**6.54**	**1.53**	**1.48**	**1.22**	**36.1**
Antimony					1.65 R					0.064 U	0.0586 U	0.181 U	0.2 U	0.167 U	0.163 U	0.162 U	**0.201**
Selenium					**0.645** J					**0.229**	**0.103**	**1.1**	**1.96**	**0.641**	**0.567**	**0.721**	**1.08**
Thallium					0.277 UJ					**0.0644**	**0.0703**	0.181 U	0.2 U	0.167 U	0.163 U	0.162 U	0.172 U
Zinc					**28.3**					**40.2**	**47.5**	**46.1**	**83.7**	**24.4**	**22.1**	**20**	**66.2**
Chromium, Hexavalent	19										0.649 UJ						
PAH (8270 sim) in mg/kg																	
1-Methylnaphthalene																	
2-Methylnaphthalene																	
Naphthalene																	
Total Naphthalenes	5																
Acenaphthylene																	
Acenaphthene																	
Fluorene																	
Phenanthrene																	
Anthracene																	
Fluoranthene																	
Pyrene																	
Benzo(a)anthracene																	
Chrysene																	
Benzo(b)fluoranthene																	
Benzo(k)fluoranthene																	
Benzo(a)pyrene	0.1																
Indeno(1,2,3-cd)pyrene																	
Dibenzo(ah)anthracene																	
Benzo(ghi)perylene																	
cPAH TEQ	0.1																
8082 (PCBs) in mg/kg																	
A1221																	
A1232																	
A1242 (A1016)																	
A1248																	
A1254																	
A1260																	
Total PCBs	1																

Table 4 - Analytical Results for Characterization and Stockpile Soil Samples

Sample ID	MTCA	UF-S12	UF-E-SP1	UF-E-SP2	UF-E-SP3	UF-D-SP1	UF-D-SP2	UF-D-SP3	UF-F-SW-E
Sampling Date	Method A	3/25/2016	04/06/16	04/06/16	04/06/16	04/08/16	04/08/16	04/08/16	04/13/16
Elevation in Feet (Approx.)	Cleanup Level[a]	90 to 93							93 to 96
pH		**6.8** J							
Moisture in %		**17.5%**	**13%**	**12%**	**13%**	**29%**	**16%**	**18%**	**12%**
TPH in mg/kg									
Kerosene/Jet fuel	2000		20 U	20 U	20 U	20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000		**2,000**	**2,300**	**5,100**	20 U	**89**	20 U	**2,100**
Heavy oil	2000		**450**	**660**	**2,300**	50 U	50 U	50 U	50 U
NWTPH-Gx in mg/kg									
Mineral spirits/Stoddard	30/100[b]		5.0 U	5.0 U	5.0 U				
Gasoline	30/100[b]		5.0 U	5.0 U	5.0 U				
BTEX 8021B in µg/kg									
Benzene	30		20 U	20 U	20 U				
Toluene	7000		50 U	50 U	50 U				
Ethylbenzene	6000		50 U	50 U	50 U				
Xylenes	9000		50 U	50 U	50 U				
Metals in mg/kg									
Silver		0.0866 U							
Arsenic	20	**2.18**							
Beryllium		**0.237**							
Cadmium	2	0.173 U							
Chromium	19/2000[c]	**44.4**							
Copper		**24.2**							
Mercury	2	0.2 U							
Nickel		**40.1**							
Lead	250	**2.25**							
Antimony		0.173 U							
Selenium		**1.16**							
Thallium		0.173 U							
Zinc		**28.3**							
Chromium, Hexavalent	19								
PAH (8270 sim) in mg/kg									
1-Methylnaphthalene			**9.4**						
2-Methylnaphthalene			**7.1**						
Naphthalene			**1.6**						
Total Naphthalenes	5		**18.1**						
Acenaphthylene			0.10 U						
Acenaphthene			**1.4**						
Fluorene			0.10 U						
Phenanthrene			**7.5**						
Anthracene			0.10 U						
Fluoranthene			**1.0**						
Pyrene			**1.8**						
Benzo(a)anthracene			0.10 U						
Chrysene			**0.40**						
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						
cPAH TEQ	0.1		**0.004**						
8082 (PCBs) in mg/kg									
A1221			0.2 U						
A1232			0.2 U						
A1242 (A1016)			0.2 U						
A1248			0.2 U						
A1254			0.2 U						
A1260			0.2 U						
Total PCBs	1		0.2 U						

U = Not detected at reporting limit indicated.
J = Estimated value.
R = Rejected.
T = Reported result below associated quantitation limit but avoe method detection limit.
Concentrations that exceed cleanup level are shaded.
Detected concentrations are bolded.
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.
Blank indicates sample not analyzed for specific analyte.

Table 5 - Analytical Results for Verification Soil Samples

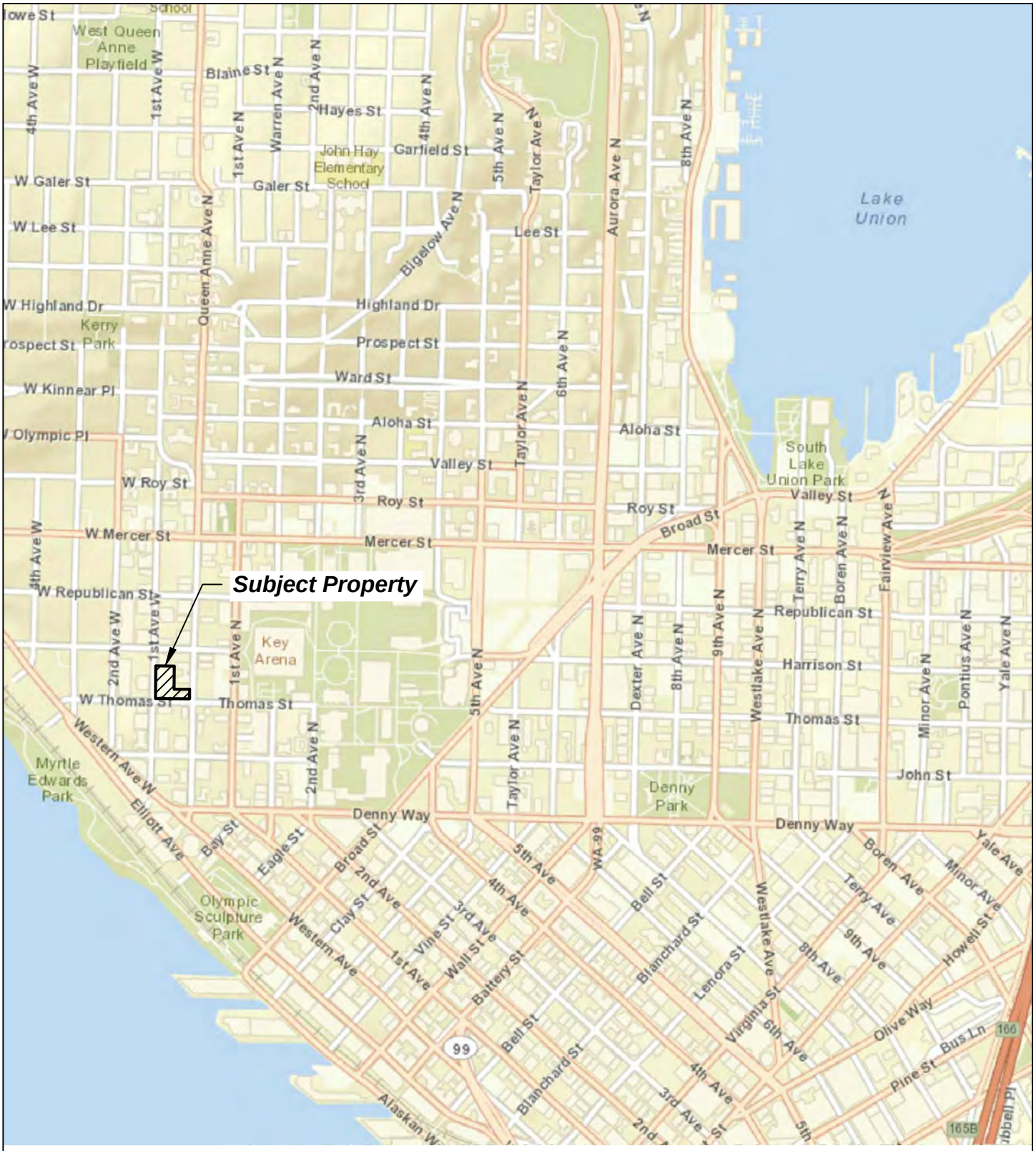
Sample ID	MTCA	UF-D-N	UF-D-E	UF-D-S	UF-D-W	UF-D-B	UF-F-SW-S	UF-F-B	UF-F-SW-N
Sampling Date	Method A	04/08/16	04/08/16	04/08/16	04/08/16	04/08/16	04/13/16	04/13/16	04/15/16
Elevation in Feet (Approx.)	Cleanup Level[a]	89	89	86	86	87	96	93	95
pH									
Moisture in %		**16%**	**12%**	**22%**	**16%**	**11%**	**10%**	**10%**	**12%**
TPH in mg/kg									
Kerosene/Jet fuel	2000	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
Heavy oil	2000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
PAH (8270 sim) in mg/kg									
1-Methylnaphthalene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
2-Methylnaphthalene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Naphthalene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Total Naphthalenes	5	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Acenaphthylene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Acenaphthene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Fluorene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Phenanthrene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Anthracene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Fluoranthene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Pyrene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Benzo(a)anthracene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Chrysene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Benzo(b)fluoranthene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Benzo(k)fluoranthene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Benzo(a)pyrene	0.1	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Indeno(1,2,3-cd)pyrene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Dibenzo(ah)anthracene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
Benzo(ghi)perylene		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U			
cPAH TEQ	0.1	NC	NC	NC	NC	NC			

U = Not detected at reporting limit indicated.
NC = Not calculated.
a. Method A soil cleanup level for unrestricted land uses.
Blank indicates sample not analyzed for specific analyte.

Table 6 - Summary of Impacted Soil Disposal Tonnage

Disposal Date	Disposal Facility	Soil Classification	Tonnage	
3/22/2016	Cemex	3	14.62	
4/8/2016	Cemex	3	34.22	
4/8/2016	Cemex	3	30.29	
4/14/2016	Cemex	3	19.09	
		Total	**98.22**	**Tons**

Disposal Date	Disposal Facility	Soil Classification	Tonnage
3/22/2016	Cemex	2	28.88
3/22/2016	Cemex	2	29.72
3/22/2016	Cemex	2	28.33
3/29/2016	Cemex	2	33.49
3/29/2016	Cemex	2	32.02
4/12/2016	Cemex	2	23.39
		Total	**175.83**



Source: Base map prepared from ArcGIS Online, 2014.

Uptown Flats Project
Seattle, Washington

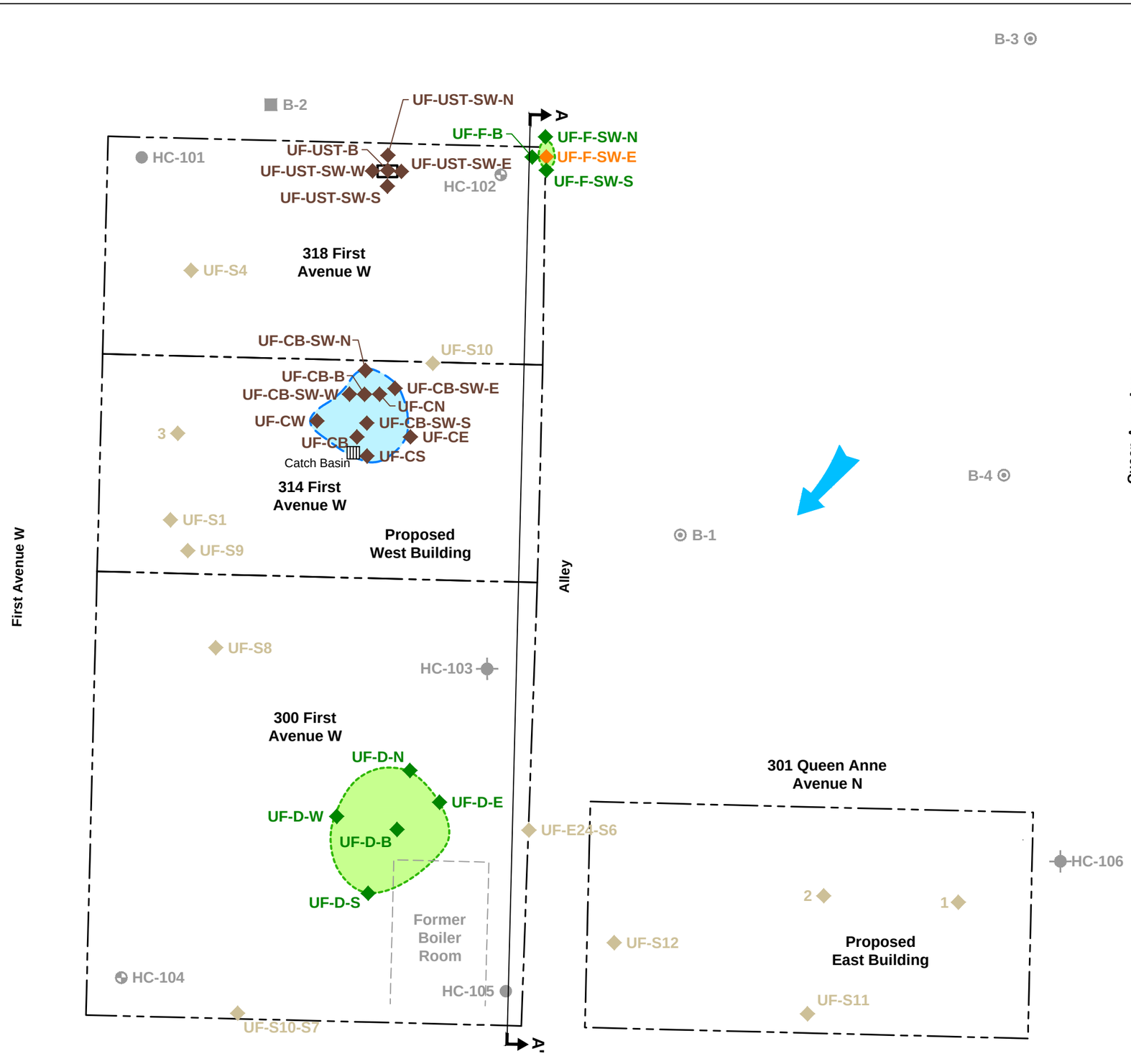
Vicinity Map

19040-06 12/16

HARTCROWSER

Figure
1

EAL 12/1/16 1904006-001.dwg



Legend

- UF-CS — Characterization sample (Hart Crowser 2016)
- UF-F-SW-E — Characterization sample exceeding MTCA Method A cleanup levels (Hart Crowser 2016)
- UF-D-S — Verification sample (Hart Crowser 2016)
- 1 — Clean soil disposal characterization sample (Hart Crowser 2016)
- HC-103 — Boring (Hart Crowser 2015)
- HC-102 — Monitoring well (Hart Crowser 2015)
- HC-101 — Exploration (Hart Crowser 2014)
- B-1 — Exploration (Pan Geo 2014)
- B-2 — Exploration (Geotech Consultants, Inc. 1999)
- B-1 — Exploration (Geotech Consultants, Inc. 1996)
- Underground storage tank (UST)
- Approximate location of soil above MTCA Method A cleanup levels - removed and disposed of off-site
- Approximate location of soil below MTCA Method A cleaup levels - removed and disposed of off-site
- A A' — Approximate cross section location and designation
- Property boundary
- Inferred groundwater flow direction

N

0 30 60

Scale in Feet

Uptown Flats Project
Seattle, Washington

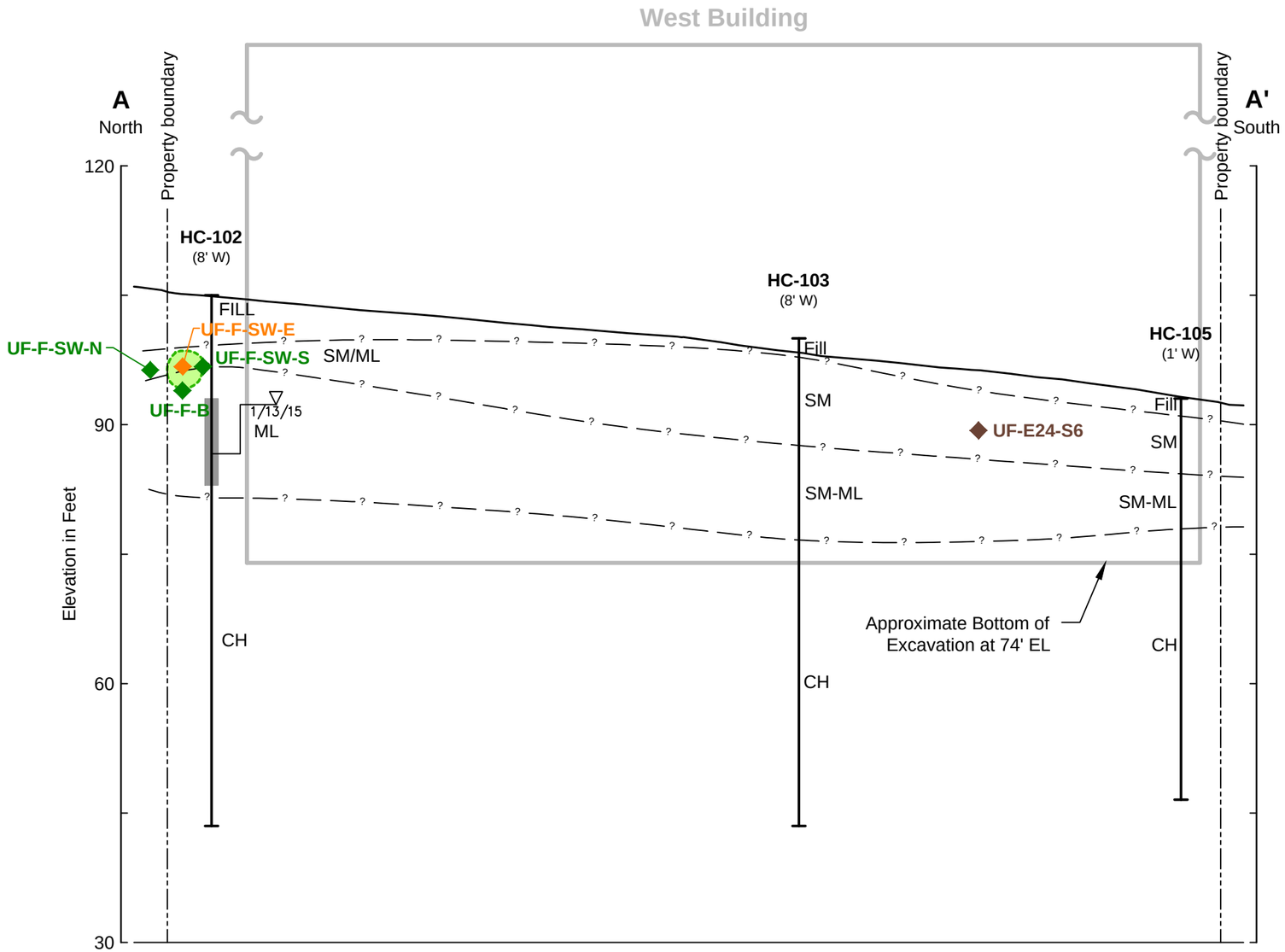
Site Plan and Characterization and Verification Sample Locations

19040-06 12/16

HARTCROWSER

Figure 2

EAL 12/1/16 1904006-003.dwg



Legend

HC-104 (19' S) — Exploration number (offset distance and direction)

Exploration location

ATD — Water level

Screened interval

Approximate location of soil above MTCA Method A cleanup levels - removed and disposed of off-site

UF-E24-S6 — Characterization sample (Hart Crowser 2016)

UF-F-SW-E — Characterization sample exceeding MTCA Method A cleanup levels (Hart Crowser 2016)

UF-F-B — Verification sample (Hart Crowser 2016)

Horizontal Scale in Feet
0 30 60
0 15 30
Vertical Scale in Feet
Vertical Exaggeration x 2

Note:
Contacts between soil units are based upon interpolation between borings and represent our interpretation of subsurface conditions based on currently available data.

Uptown Flats Project
Seattle, Washington

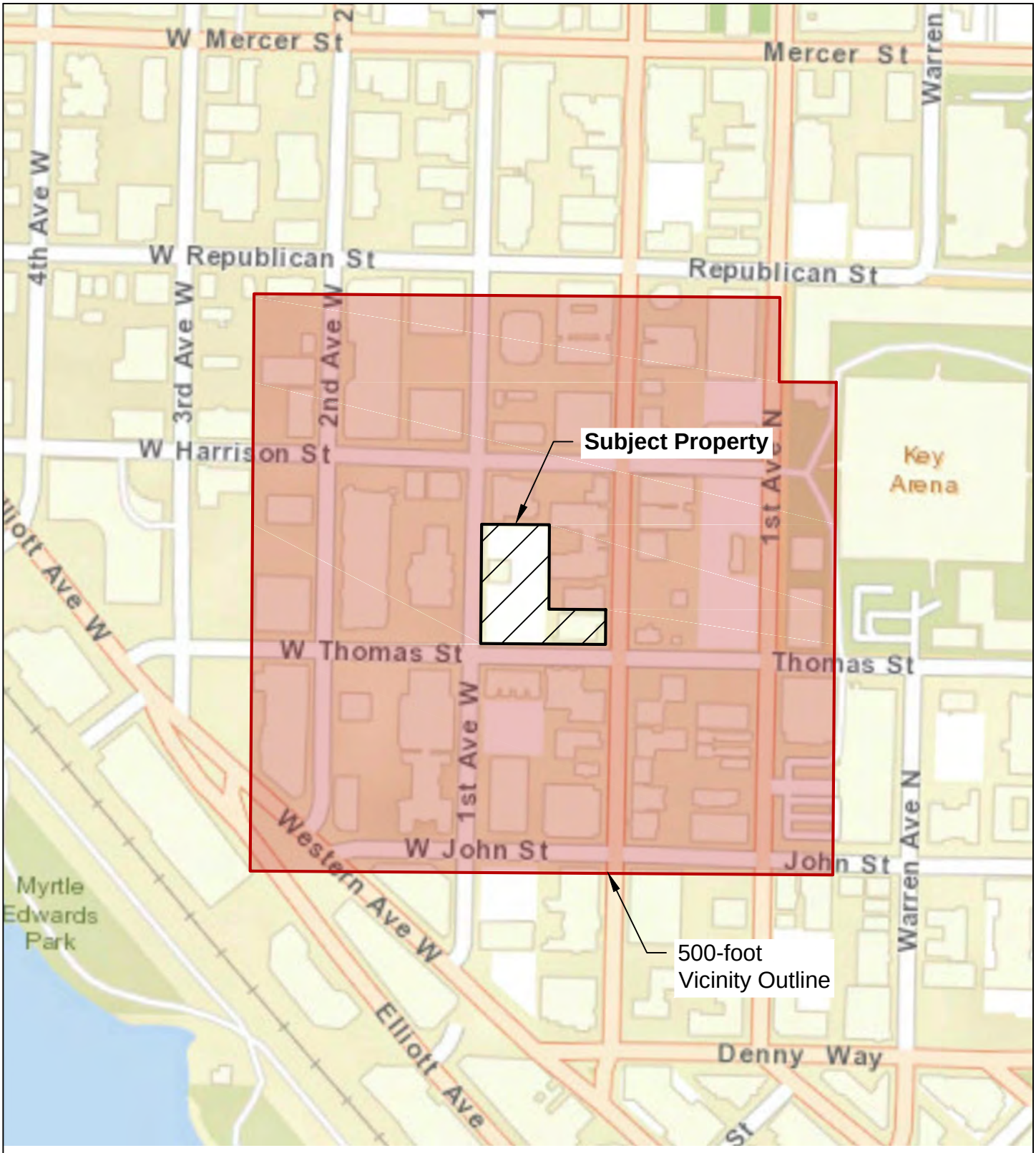
Generalized Subsurface Cross Section A-A'

19040-06 12/16

HARTCROWSER

Figure
3

EAL 12/1/16 1904006-005.dwg



Source: Base map prepared from ArcGIS Online, 2014.

0 300 600

Scale in Feet

N

Uptown Flats Project
Seattle, Washington

TEE Exclusion-Undeveloped Land

19040-06 12/16

HARTCROWSER

Figure
4

EAL 12/1/16 1904006-004.dwg

APPENDIX A
Chemical Data Quality Review and Laboratory Reports

APPENDIX A
CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS

Chemical Data Quality Review

During the Uptown Flats project, samples were submitted to Advanced Analytical Laboratory (AAL), in Bellevue, Washington; Fremont Analytical (Fremont), in Seattle, Washington; and AmTest Laboratories (AmTest), in Kirkland, Washington, for chemical analysis. The date(s) collected, analyses requested, and laboratory report reference numbers are provided in Table 3 – Sample Summary of the report.

Selected soil samples were analyzed for one or more of the following:

- Diesel- and heavy-oil-range organics by Washington State Department of Ecology (Ecology) method NWTPH-Dx;
- Gasoline-range organics by Ecology method NWTPH-Gx;
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B;
- Total Metals (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Thallium, and Zinc) by EPA Methods 6010C/6020A;
- Total mercury by EPA Methods 7471A/6010C;
- Hexavalent chromium by EPA Method 7196A;
- pH by EPA Method 9045;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C-SIM;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082; and
- Percent moisture by Standard Method 2540B.

Quality assurance/quality control (QA/QC) review of laboratory procedures are performed on an ongoing basis by the laboratory. Hart Crowser reviewed the data using laboratory quality control results summary sheets to determine if they met data quality objectives for the project. The following criteria were evaluated in the standard data quality review process.

- Holding times;
- Method blanks;
- Surrogate recoveries;
- Laboratory duplicate relative percent differences (RPDs);
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries;
- Laboratory control sample (LCS) recoveries;
- Standard reference material (SRM) recoveries; and
- Reporting limits (RL).

Most of the data were determined to be acceptable for use with minor qualification. One analyte was rejected (R) due to quality control issues. Full laboratory results are presented at the end of this appendix. Results of the data review follows.

Sample Receiving Notes

1603266. The samples were received at the laboratory above the method recommended temperature of 2 to 6°C. Samples UF-S8, UF-S9, and UF-S10 were received at the laboratory within four hours of collection, and may not have had time to equilibrate with the coolant, and therefore sample results were not qualified. Sample UF-E24-S6 was stored in a refrigerator before shipment to the laboratory. The analyses for pH and metals in sample UF-E24-S6 would not be affected by the temperature exceedance, and sample results were not qualified. Sample UF-S10 was placed on hold, and analyses for pH and metals were added to the chain of custody (COC) on March 15, 2016. Hexavalent chromium was added to the COC on March 29, 2016, past the method holding time.

1603285. The samples were received at the laboratory above the method recommended temperature of 2 to 6°C. The analyses for pH and metals in the samples would not be affected by the temperature exceedance, and sample results were not qualified.

1603286. The samples were received at the laboratory above the method recommended temperature of 2 to 6°C. The samples were received at the laboratory within four hours of collection, and may not have had time to equilibrate with the coolant, and therefore sample results were not qualified.

C60128-1. Samples #1, #2, and #3 were subcontracted to AmTest by AAL for analyses of metals.

C60303-2. Sample UF-S1 was subcontracted to AmTest by AAL for analyses of metals.

C60317-2. Samples UF-S4, UF-S5, UF-UST-B, and UF-CB-B were subcontracted to AmTest by AAL for analyses of metals.

C60407-1. PCBs by EPA 8082 and PAHs by EPA 8270-SIM were added to the COC on April 7, 2016 by the laboratory by request of Hart Crowser for sample UF-E-SP3. Sample UF-D was placed on hold and not analyzed.

C60415-2. Two separate sampling events and COCs were submitted to the laboratory. These samples were combined by the laboratory and provided in one report.

None of these discrepancies would impact the quality of the analytical data, and no qualifications were made due to sample receiving discrepancies.

Soil Samples

pH by EPA 9045

Reporting limits were acceptable. No method blank contamination was detected. The laboratory duplicate RPDs were within control limits. LCS recoveries were within laboratory control limits.

The holding time for the analysis is as soon as possible (ASAP) upon receipt at the laboratory. Samples that were analyzed 24 hours or longer past sample collection were qualified as estimated due to

holding time exceedances. Samples #1, #2, #3, UF-S1, UF-S4, UF-S5, UF-UST-B, UF-CB-B, UF-E24-S6, UF-S10, UF-S11, UF-S12, and UF-CB were therefore qualified as estimated (J).

The data are acceptable for use with qualification.

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

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

The surrogate recoveries were within laboratory and method control limits with the following exceptions:

- **Samples UF-E-SP3 and UF-E-SP3 Dup**: The surrogate recoveries were not reported due to coelution with sample peaks. High levels of diesel and heavy oil were present in the samples, and results were not qualified.

- **Samples UF-F-SW-E and UF-F-SW-E Dup**: The recoveries of the surrogate o-Terphenyl were not reported due to coelution with sample peaks. The recoveries of the surrogate Fluorobiphenyl were within laboratory control limits. High levels of diesel were present in the samples, and results were not qualified.

The data are acceptable for use without qualification.

Gasoline-Range Hydrocarbons by NWTPH-Gx

Holding times and reporting limits were acceptable. No method blank contamination was detected. The surrogate recoveries were within laboratory control limits. The laboratory duplicate RPDs were NA because the sample and duplicate were ND.

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/MSD recoveries and their associated RPDs were within laboratory control limits. The laboratory duplicate RPDs were NA because the sample and duplicate were ND.

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/MSD recoveries and their 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/MSD recoveries and their associated RPDs were within laboratory control limits.

The data are acceptable for use without qualification.

Total Metals (Ag, As, Be, Cd, Cr, Cu, Ni, Pb, Se, Sb, Tl, and Zn) by EPA Method 6020

Holding times and reporting limits were acceptable. No method blank contamination was detected. LCS recoveries were within method control limits.

No method blank contamination was detected with the following exception:

- **MB (03/10/2016):** The MB had a detection for Se above the detection limit. The result for Se in the associated sample, UF-S1, was greater than 10 times the amount in the MB and not qualified.

- **MB (03/18/2016):** The MB had a detection for Se above the detection limit. The result for Se in the associated samples, (UF-S4, UF-S5, UF-UST-B, and UF-CB-B), were greater than 10 times the amount in the MB and not qualified.

The laboratory duplicate RPDs were either within control limits or were NA because the sample and duplicate were ND, with the following exceptions:

- **Batch QC Dup (03/25/16):** The RPDs for Sb and Pb exceeded the method control limit. As the source sample was a batch QC sample, project sample results were not qualified.

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

- **Batch QC MS (03/23/16):** The recoveries for Sb and Ag fell below the method control limits. The recoveries for Be exceeded the method control limits. No post-spike sample was prepared or analyzed. As the source sample was a batch QC sample, project sample results were not qualified.

- **Batch QC MS/MSD (03/25/16):** The recoveries for Sb fell below the method control limits in the MS and MSD. The recoveries for Be exceeded the method control limits in the MS and MSD. The recovery for Pb fell below the method control limits in the MS, but was within control limits in the MSD, and the RPD for Pb exceeded the method control limits. The recovery for Ag fell below the method control limits in the MSD, but was within control limits in the MS. A post-spike sample was prepared and analyzed for Sb and Be, which indicated a matrix effect for Be. As the source sample was a batch QC sample, project sample results were not qualified.

Sample Notes:

UF-S1. The laboratory qualified the result for Se with X due to interferences, and reported the result as an estimate. The X qualifier was changed to J.

The data are acceptable for use with qualification.

Total Metals (Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Se, Sb, Tl, and Zn) by EPA Method 6010C

Holding times were acceptable.

Reporting limits met requested limits with the following exceptions:

- **Amtest 16-A001167.** The reporting limits for Se in samples #1, #2, and #3 did not meet the requested limits.

No method blank contamination was detected with the following exception:

- **MB (02/02/2016):** The MB had detections for Cu, Pb, and Zn above the detection limit. The results for those metals in the associated samples (#1, #2, and #3) were greater than 10 times the amount in the MB and not qualified.

- **MB (02/10/2016):** The MB had a detection for Pb above the detection limit. The results for Pb in the associated sample, UF-S1, was greater than 10 times the amount in the MB and not qualified.

- **MB (03/18/2016):** The MB had a detection for Pb above the detection limit. The results for Pb in the associated samples, (UF-S4, UF-S5, UF-UST-B, and UF-CB-B), were greater than 10 times the amount in the MB and not qualified.

SRM recoveries were within default control limits of 70 to 130 percent with the following exceptions:

- **SRM (03/10/2016):** The recoveries for As, Cr, and Cu exceeded 130 percent. The recovery for Tl fell below 70 percent. The results for As, Cr, Cu, and Tl in sample UF-S1 were qualified as estimated (J).

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

- **#1 MS/MSD:** The recoveries for Cr, Tl, and Ni fell below the method control limits in the MSD, but were within control in the MS. The recoveries for Be exceeded the method control limits in the MS, but fell within the control limits in the MSD. The recovery for Zn exceeded the method control limits in the MSD, but fell within the control limits in the MS. The RPDs for Be and Zn exceeded the method control limits. The results for Be and Zn were qualified as estimated (J) in source sample #1.

- **UF-S1 MS/MSD:** The recoveries for Sb fell below 30 percent in the MS and MSD. No post spike was prepared or analyzed. The result for Sb in sample UF-S1 was rejected (R).

The majority of data was acceptable for use with minor qualification. The result for Sb in sample UF-S1 was rejected due to matrix spike failures.

Total Mercury by EPA Method 7471

Holding times and reporting limits were acceptable. Results were reported to the method detection limit (MDL), and sample results that fell between the MDL and the reporting limit (RL) were qualified by the laboratory with J. The J qualifier was changed to T to be consistent with Ecology's EIM qualifiers.

No method blank contamination was detected. LCS, SRM, and MS recoveries were within method control limits. The laboratory duplicate RPDs were NA because the sample and duplicate were ND.

The data are acceptable for use without qualification.

Hexavalent Chromium by EPA 7196A

Reporting limits were acceptable. No method blank contamination was detected. LCS and MS/MSD recoveries were within method control limits. The laboratory duplicate RPDs were NA because the sample and duplicate were ND.

The sample was prepared 5 days past the method recommended holding time, and the results were qualified as estimated (J).

The data are acceptable for use with qualification.

Percent Moisture

Holding times and reporting limits were acceptable. The laboratory duplicate RPDs were within control limits.

The data are acceptable for use without qualification.

Laboratory Reports
Advanced Analytical Laboratory, Inc.

ADVANCED ANALYTICAL

Environmental Testing Laboratory

February 09, 2016

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

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-05* ***(C60128-1)*** Project.

Samples were received on *January 28, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AM

HARTCROWSER C60128-1

Hart Crowser, Inc.
~~1700 Westlake Avenue North,~~ Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-05 LAB NUMBER

PROJECT NAME [illegible]

HART CROWSER CONTACT J. [illegible]

[illegible]

SAMPLED BY: [illegible]

REQUESTED ANALYSIS: [illegible] DX | [illegible] GX | pH | METALS *

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	DX		GX	pH	METALS *	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	1		1/2[illegible]	[illegible]	S	X		X	X	X	2	Metals – Sb, As, Be,
	2		↓	[illegible]	S	X		X	X	X	2	Cd, Cr, Cu, Pb, Hg
	3		↓	[illegible]	S	X		X	X	X	2	Ni, Se, Ag, Tl, Zn

* Metals sub'd to AmTest VI 01/29/16

RELINQUISHED BY	DATE	RECEIVED BY	DATE
[illegible signature]	[illegible]	V Ivanov	01/28/16
SIGNATURE	TIME	SIGNATURE	TIME
[illegible]	[illegible]	VAL IVANOV	13:30
PRINT NAME		PRINT NAME	
[illegible]		FAL	
COMPANY		COMPANY	

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

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. ______ for Other Contract Requirements

6 TOTAL NUMBER OF CONTAINERS

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

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☒ STANDARD
☐ 72 HOURS OTHER ______

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60128-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-05
Date received:	01/28/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60128-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-05
Date received: 01/28/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	#1	#2	#3	Dupl #3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/28/16	01/28/16	01/28/16	01/28/16	01/28/16
Date analyzed	Limits	01/28/16	01/28/16	01/28/16	01/28/16	01/28/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		96%	96%	98%	96%	97%
o-Terphenyl		92%	94%	98%	92%	95%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60128-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-05
Date received: 01/28/16

Analytical Results

NWTPH-Gx/BTEX		MTH BLK	#1	#2	#3	Dupl #3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/28/16	01/28/16	01/28/16	01/28/16	01/28/16
Date analyzed	Limits	01/28/16	01/28/16	01/28/16	01/28/16	01/28/16
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd	nd
Surrogate recoveries:						
Trifluorotoluene		102%	100%	111%	116%	114%
Bromofluorobenzene		96%	109%	116%	104%	112%

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

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number:	C60128-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-05
Date received:	01/28/16

Analytical Results

pH (9045)	**#1**	**#2**	**#3**
Matrix	Soil	Soil	Soil
Date analyzed	01/28/16	01/28/16	01/28/16
pH	5.6	5.6	5.7

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60128-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-05
Date received: 01/28/16

Analytical Results

Moisture, SM2540B	#1	#2	#3
Matrix	Soil	Soil	Soil
Date analyzed	02/03/16	02/03/16	02/03/16
Moisture, %	14%	16%	10%

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 9 2016
Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov

Dear Val Ivanov:

Enclosed please find the analytical data for your Uptown Flats project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
#1	Soil	16-A001167	CONV, MET
#2	Soil	16-A001168	CONV, MET
#3	Soil	16-A001169	CONV, MET

Your samples were received on Friday, January 29, 2016. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: C60128-1(19040-
PO Number: C60128-1(19040-05)

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov
Project Name: Uptown Flats
Project #: C60128-1(19040-
PO Number: C60128-1(19040-05)
All results reported on a dry weight basis.

Date Received: 01/29/16
Date Reported: 2/ 9/16

AMTEST Identification Number **16-A001167**
Client Identification **#1**
Sampling Date **01/27/16, 04:07**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	86.6	%		0.1	SM 2540B	JR	02/04/16

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	02/02/16
Silver	7.30	ug/g		0.18	EPA 6010C	MH	02/08/16
Arsenic	3.49	ug/g		0.36	EPA 6010C	MH	02/08/16
Beryllium	< 0.0179	ug/g		0.02	EPA 6010C	MH	02/08/16
Cadmium	< 0.08934	ug/g		0.09	EPA 6010C	MH	02/08/16
Chromium	20.1	ug/g		0.18	EPA 6010C	MH	02/08/16
Copper	16.1	ug/g		0.04	EPA 6010C	MH	02/08/16
Mercury	< 0.179	ug/g		0.18	EPA 6010C	MH	02/08/16
Nickel	28.5	ug/g		0.18	EPA 6010C	MH	02/08/16
Lead	36.5	ug/g		0.36	EPA 6010C	MH	02/08/16
Antimony	< 1.07	ug/g		1.07	EPA 6010C	MH	02/08/16
Selenium	< 0.72	ug/g		0.71	EPA 6010C	MH	02/08/16
Thallium	< 0.179	ug/g		0.18	EPA 6010C	MH	02/08/16
Zinc	56.6	ug/g		0.04	EPA 6010C	MH	02/08/16

AMTEST Identification Number **16-A001168**
Client Identification **#2**
Sampling Date **01/27/16, 04:07**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	82.9	%		0.1	SM 2540B	JR	02/04/16

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	02/02/16
Silver	6.49	ug/g		0.21	EPA 6010C	MH	02/08/16
Arsenic	3.08	ug/g		0.42	EPA 6010C	MH	02/08/16
Beryllium	< 0.0209	ug/g		0.02	EPA 6010C	MH	02/08/16
Cadmium	< 0.1045	ug/g		0.10	EPA 6010C	MH	02/08/16
Chromium	14.7	ug/g		0.21	EPA 6010C	MH	02/08/16
Copper	14.7	ug/g		0.04	EPA 6010C	MH	02/08/16
Mercury	< 0.209	ug/g		0.21	EPA 6010C	MH	02/08/16
Nickel	30.4	ug/g		0.21	EPA 6010C	MH	02/08/16
Lead	17.7	ug/g		0.42	EPA 6010C	MH	02/08/16
Antimony	< 1.25	ug/g		1.25	EPA 6010C	MH	02/08/16
Selenium	< 0.83	ug/g		0.84	EPA 6010C	MH	02/08/16
Thallium	< 0.209	ug/g		0.21	EPA 6010C	MH	02/08/16
Zinc	35.8	ug/g		0.04	EPA 6010C	MH	02/08/16

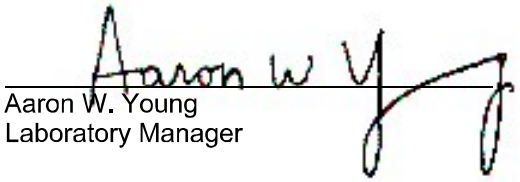
AMTEST Identification Number **16-A001169**
Client Identification **#3**
Sampling Date **01/27/16, 04:07**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	88.3	%		0.1	SM 2540B	JR	02/04/16

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	02/02/16
Silver	5.54	ug/g		0.16	EPA 6010C	MH	02/08/16
Arsenic	2.13	ug/g		0.32	EPA 6010C	MH	02/08/16
Beryllium	< 0.0157	ug/g		0.02	EPA 6010C	MH	02/08/16
Cadmium	< 0.0789	ug/g		0.08	EPA 6010C	MH	02/08/16
Chromium	12.1	ug/g		0.16	EPA 6010C	MH	02/08/16
Copper	12.3	ug/g		0.03	EPA 6010C	MH	02/08/16
Mercury	< 0.157	ug/g		0.16	EPA 6010C	MH	02/08/16
Nickel	27.9	ug/g		0.16	EPA 6010C	MH	02/08/16
Lead	72.4	ug/g		0.32	EPA 6010C	MH	02/08/16
Antimony	< 0.95	ug/g		0.95	EPA 6010C	MH	02/08/16
Selenium	< 0.63	ug/g		0.63	EPA 6010C	MH	02/08/16
Thallium	< 0.157	ug/g		0.16	EPA 6010C	MH	02/08/16
Zinc	32.3	ug/g		0.03	EPA 6010C	MH	02/08/16



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
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AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 16-A001167 to 16-A001169

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
16-A001350	Total Solids	%	18.3	18.6	1.6
16-A000947	Total Solids	%	21.1	20.4	3.4

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A001167	Silver	ug/g	6.32	50.5	40.0	110.45 %
16-A001167	Silver	ug/g	6.32	47.1	40.0	101.95 %
16-A001167	Arsenic	ug/g	3.02	40.9	40.0	94.70 %
16-A001167	Arsenic	ug/g	3.02	37.4	40.0	85.95 %
16-A001167	Beryllium	ug/g	< 0.0155	111.	40.0	277.50 %
16-A001167	Beryllium	ug/g	< 0.0155	38.3	40.0	95.75 %
16-A001167	Cadmium	ug/g	< 0.07737	36.30	40.00	90.75 %
16-A001167	Cadmium	ug/g	< 0.07737	34.00	40.00	85.00 %
16-A001167	Chromium	ug/g	17.4	56.6	40.0	98.00 %
16-A001167	Chromium	ug/g	17.4	47.3	40.0	74.75 %
16-A001167	Copper	ug/g	13.9	56.1	40.0	105.50 %
16-A001167	Copper	ug/g	13.9	51.8	40.0	94.75 %
16-A001167	Nickel	ug/g	24.7	59.0	40.0	85.75 %
16-A001167	Nickel	ug/g	24.7	52.8	40.0	70.25 %
16-A001167	Lead	ug/g	31.6	67.3	40.0	89.25 %
16-A001167	Lead	ug/g	31.6	66.8	40.0	88.00 %
16-A001167	Selenium	ug/g	< 0.62	33.7	40.0	84.25 %
16-A001167	Selenium	ug/g	< 0.62	31.4	40.0	78.50 %
16-A001167	Thallium	ug/g	< 0.155	31.0	40.0	77.50 %
16-A001167	Thallium	ug/g	< 0.155	28.8	40.0	72.00 %
16-A001167	Zinc	ug/g	49.0	90.1	40.0	102.75 %
16-A001167	Zinc	ug/g	49.0	255.	40.0	515.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Silver	ug/g	50.5	47.1	7.0
Spike	Arsenic	ug/g	40.9	37.4	8.9
Spike	Beryllium	ug/g	111.	38.3	97.
Spike	Cadmium	ug/g	36.30	34.00	6.5
Spike	Chromium	ug/g	56.6	47.3	18.
Spike	Copper	ug/g	56.1	51.8	8.0
Spike	Nickel	ug/g	59.0	52.8	11.
Spike	Lead	ug/g	67.3	66.8	0.75
Spike	Selenium	ug/g	33.7	31.4	7.1
Spike	Thallium	ug/g	31.0	28.8	7.4
Spike	Zinc	ug/g	90.1	255.	96.

QC Summary for sample numbers: 16-A001167 to 16-A001169...

BLANKS

ANALYTE	UNITS	RESULT
Total Solids	%	< 0.1
Total Solids	%	< 0.1
Silver	ug/g	< 0.005
Arsenic	ug/g	< 0.01
Beryllium	ug/g	< 0.0005
Cadmium	ug/g	< 0.0025
Chromium	ug/g	< 0.005
Copper	ug/g	0.035
Nickel	ug/g	< 0.005
Lead	ug/g	0.01
Antimony	ug/g	< 0.03
Selenium	ug/g	< 0.02
Thallium	ug/g	< 0.005
Zinc	ug/g	0.002

ADVANCED ANALYTICAL

Chain of Custody Record

Page of

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
~~(425) 497-0110 fax: (425) 497-8089~~ (425) 747-7009
aachemlab@yahoo.com

P7

Client: Advanced Analytical Lab

Project Manager: VAL IVANOV

Address:

Phone: 425 747-7009 Fax:

Project Name: Uptown Flats

Project Number: C60128-1 (19040-05)

Collector:

Date of collection: 01/27/16

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Metals (*) PPM13			Notes, comments	# of containers
1	#1 107		Soil	4oz														X				1
2	#2 108		↓	↓														X				1
3	#3 109		↓	↓														X				1
4																					(*) Sb, As, Be	
5																					Cd, Cr, Cu,	
6																					Pb, Hg, Ni	
7																					Se, Ag, Tl, Zn	
8																						
9																						
10																						
11																						
12																						

Relinquished by:	Date/Time	Received by:	Date/Time
V. Ivanov	01/29/16		
Relinquished by:	**Date/Time**	**Received by:**	**Date/Time**
RM	1/29/16	1045 t=2.7°C clear	

Sample receipt info:

Total # of containers:

Condition (temp, °C)

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day O

24 hr O

48 hr O

Standard ⊗

5 days

ADVANCED ANALYTICAL

Environmental Testing Laboratory

March 11, 2016

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

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-05* ***(C60303-2)*** Project.

Samples were received on *March 02, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

C60303-2

Samples Shipped to: AAL

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 1904005 LAB NUMBER

PROJECT NAME UPTOWN FLATS

HART CROWSER CONTACT JULIE WUKELIC

SAMPLED BY:

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: *	13 METALS	PH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-S1	SL SILTY GRAV SAND	3/2/16	0900	SOIL		X	X	1	Composite Sample UF-S1
										* Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

RELINQUISHED BY	DATE	RECEIVED BY	DATE
3/3/16	~~11:20~~	V. Ivanov	03/03/16
SIGNATURE	TIME	SIGNATURE VAL IVANOV	TIME
PRINT NAME Hunter Simcak	11:20	PRINT NAME AAL	13:30
COMPANY HART CROWSER		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
Need Se Reporting Limit to 0.5 mg/kg

1 TOTAL NUMBER OF CONTAINERS

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

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 and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60303-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-05
Date received:	03/03/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number:	C60303-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-05
Date received:	03/03/16

Analytical Results

pH (9045)	UF-S1
Matrix	Soil
Date analyzed	03/07/16
pH	6.6

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number:	C60303-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-05
Date received:	03/03/16

Analytical Results

Moisture, SM2540B	**UF-S1**
Matrix	Soil
Date analyzed	03/08/16
Moisture, %	12%

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Mar 11 2016
Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov

Dear Val Ivanov:

Enclosed please find the analytical data for your UPTOWN FLATS project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
UF-S1	Soil	16-A003325	CONV, MET, Hg-CV, MET

Your sample was received on Friday, March 4, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: C60303-2

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

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Professional Analytical Services

ANALYSIS REPORT

Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov
Project Name: UPTOWN FLATS
Project #: C60303-2
All results reported on a dry weight basis.

Date Received: 03/04/16
Date Reported: 3/11/16

AMTEST Identification Number **16-A003325**
Client Identification **UF-S1**
Sampling Date

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	88.9	%		0.1	SM 2540B	MJ	03/08/16

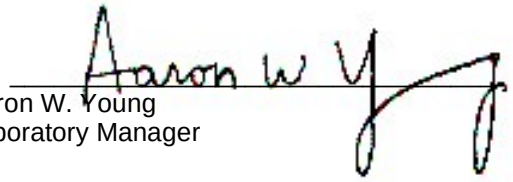
Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	03/10/16
Silver	5.66	ug/g		0.277	EPA 6010C	MH	03/10/16
Arsenic	1.42	ug/g		0.553	EPA 6010C	MH	03/10/16
Beryllium	0.292	ug/g		0.028	EPA 6010C	MH	03/10/16
Cadmium	< 0.02765	ug/g		0.028	EPA 6010C	MH	03/10/16
Chromium	10.4	ug/g		0.277	EPA 6010C	MH	03/10/16
Copper	10.5	ug/g		0.277	EPA 6010C	MH	03/10/16
Nickel	25.5	ug/g		0.111	EPA 6010C	MH	03/10/16
Lead	11.2	ug/g		0.553	EPA 6010C	MH	03/10/16
Antimony	< 1.65	ug/g		1.66	EPA 6010C	MH	03/10/16
Thallium	< 0.277	ug/g		0.277	EPA 6010C	MH	03/10/16
Zinc	28.3	ug/g		0.111	EPA 6010C	MH	03/10/16
Selenium	0.645	ug/g	X	0.011	SW-846 6020A	HL	03/11/16
Mercury	0.0136	ug/g		0.01	SW-846 7471A	AY	03/09/16

Case Narrative:

The Selenium result by method EPA 6020 had interference and should be considered an estimate. The readings were taken from the CCT mode.

No further corrective action was taken.



Aaron W. Young
Laboratory Manager

Am Test Inc.
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Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample number: 16-A003325

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
16-A002599	Total Solids	%	46.0	44.4	3.5
16-A003333	Total Solids	%	35.8	38.2	6.5

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A003325	Silver	ug/g	5.03	58.9	48.0	112.23 %
16-A003325	Silver	ug/g	5.03	61.8	48.0	118.27 %
16-A003325	Arsenic	ug/g	1.26	46.9	48.0	95.08 %
16-A003325	Arsenic	ug/g	1.26	48.9	48.0	99.25 %
16-A003325	Beryllium	ug/g	0.260	49.5	48.0	102.58 %
16-A003325	Beryllium	ug/g	0.260	52.5	48.0	108.83 %
16-A003325	Cadmium	ug/g	< 0.02458	44.30	48.00	92.29 %
16-A003325	Cadmium	ug/g	< 0.02458	47.50	48.00	98.96 %
16-A003325	Chromium	ug/g	9.26	68.9	48.0	124.25 %
16-A003325	Chromium	ug/g	9.26	63.7	48.0	113.42 %
16-A003325	Copper	ug/g	9.30	61.8	48.0	109.38 %
16-A003325	Copper	ug/g	9.30	64.6	48.0	115.21 %
16-A002876	Mercury	ug/g	0.0985	0.291	0.155	124.19 %
16-A002876	Mercury	ug/g	0.0985	0.286	0.155	120.97 %
16-A003004	Mercury	ug/g	0.247	0.444	0.151	130.46 %
16-A003004	Mercury	ug/g	0.247	0.438	0.151	126.49 %
16-A003014	Mercury	ug/g	0.129	0.277	0.138	107.25 %
16-A003014	Mercury	ug/g	0.129	0.302	0.138	125.36 %
16-A003325	Mercury	ug/g	0.0121	0.0521	0.0402	99.50 %
16-A003325	Mercury	ug/g	0.0121	0.0567	0.0402	110.94 %
16-A003325	Nickel	ug/g	22.7	64.1	48.0	86.25 %
16-A003325	Nickel	ug/g	22.7	72.6	48.0	103.96 %
16-A003325	Lead	ug/g	10.0	56.0	48.0	95.83 %
16-A003325	Lead	ug/g	10.0	56.9	48.0	97.71 %
16-A003325	Antimony	ug/g	< 1.47	13.8	48.0	28.75 %
16-A003325	Antimony	ug/g	< 1.47	13.5	48.0	28.12 %
16-A003325	Thallium	ug/g	< 0.246	39.8	48.0	82.92 %
16-A003325	Thallium	ug/g	< 0.246	43.2	48.0	90.00 %
16-A003325	Zinc	ug/g	25.2	76.0	48.0	105.83 %
16-A003325	Zinc	ug/g	25.2	75.6	48.0	105.00 %
16-A003325	Selenium	ug/g	0.573	49.5	48.3	101.30 %
16-A003325	Selenium	ug/g	0.573	54.8	48.3	112.27 %

QC Summary for sample number: 16-A003325...

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Silver	ug/g	58.9	61.8	4.8
Spike	Arsenic	ug/g	46.9	48.9	4.2
Spike	Beryllium	ug/g	49.5	52.5	5.9
Spike	Cadmium	ug/g	44.30	47.50	7.0
Spike	Chromium	ug/g	68.9	63.7	7.8
Spike	Copper	ug/g	61.8	64.6	4.4
Spike	Mercury	ug/g	0.291	0.286	1.7
Spike	Mercury	ug/g	0.444	0.438	1.4
Spike	Mercury	ug/g	0.277	0.302	8.6
Spike	Mercury	ug/g	0.0521	0.0567	8.5
Spike	Nickel	ug/g	64.1	72.6	12.
Spike	Lead	ug/g	56.0	56.9	1.6
Spike	Antimony	ug/g	13.8	13.5	2.2
Spike	Thallium	ug/g	39.8	43.2	8.2
Spike	Zinc	ug/g	76.0	75.6	0.53
Spike	Selenium	ug/g	49.5	54.8	10.

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Silver	ug/g	40.6	45.1	111. %
Arsenic	ug/g	300.	394.	131. %
Beryllium	ug/g	188.	237.	126. %
Cadmium	ug/g	121.0	138.0	114. %
Chromium	ug/g	324.	497.	153. %
Copper	ug/g	205.	289.	141. %
Mercury	ug/g	1.00	1.04	104. %
Mercury	ug/g	29.8	31.5	106. %
Mercury	ug/g	1.00	1.03	103. %
Nickel	ug/g	347.	442.	127. %
Lead	ug/g	357.	322.	90.2 %
Antimony	ug/g	131.	124.	94.7 %
Thallium	ug/g	300.	200.	66.7 %
Zinc	ug/g	259.	327.	126. %
Selenium	ug/g	0.148	0.118	79.7 %

BLANKS

ANALYTE	UNITS	RESULT
Total Solids	%	< 0.1
Total Solids	%	< 0.1
Silver	ug/g	< 0.25
Arsenic	ug/g	< 0.5
Beryllium	ug/g	< 0.025
Cadmium	ug/g	< 0.025
Chromium	ug/g	< 0.25
Copper	ug/g	< 0.25
Mercury	ug/g	< 0.005
Mercury	ug/g	< 0.005

QC Summary for sample number: 16-A003325...

BLANKS continued....

ANALYTE	UNITS	RESULT
Mercury	ug/g	< 0.005
Nickel	ug/g	< 0.1
Lead	ug/g	0.90
Antimony	ug/g	< 1.5
Thallium	ug/g	< 0.25
Zinc	ug/g	< 0.1
Selenium	ug/g	0.0005

ADVANCED ANALYTICAL

Chain of Custody Record

Page of

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
~~(425) 497-0110~~ fax: (425) 497-8089
aachemlab@yahoo.com

P.7

Client: Advanced Analytical Lab

Project Manager: VAL IVANOV

Address:

Phone: 425 747-7009 Fax:

Project Name: Uptown Flats

Project Number: C60303-2 (19040-05)

Collector:

Date of collection: 03/02/16

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Metals (PPM 13) (ICP-MS)		Notes, comments	# of containers
1	UF-S1 (3325)		soil bag														X				1
2																					
3																					
4																				* Sb, As, Be	
5																				Cd, Cr, Cu	
6																				Pb, Ho, Ni	
7																				Se, Ag, Tl, Zn	
8																					
9																				(Please, Reporting	
10																				limit for	
11																				Se 0.5 mg/kg)	
12																				VOT	

Relinquished by:	Date/Time	Received by:	Date/Time
V. Ivanov 03/04/16		[illegible]	3/4/16 815
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp, °C) 8.1

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day O

24 hr O

48 hr O

~~Standard~~ O

5 business days

ADVANCED ANALYTICAL

Environmental Testing Laboratory

March 28, 2016

Anne Conrad
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Dear Ms. Conrad:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-05* ***(C60317-2)*** Project.

Samples were received on *March 17, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

 C60317-2

Sample Custody Record

Samples Shipped to: AAL

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: M. Goodman + A. Conrad

REQUESTED ANALYSIS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	pH	13 Metals	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-UST-SW-W		3/17/16	1120	S	X			1	* 13 METALS
	UF-S4		3/16/16	1330	↓		X	X	1	- See TC [illegible]
	UF-UST-SW-E		3/17/16	1125	↓	X			1	
[illegible]	~~UF-SW-W-E16~~ UF-CB-SW-W		↓	0852	↓	X			1	
	UF-UST-SW-S		↓	1121	↓	X			1	
	UF-S5		↓	0820	↓		X	X	1	
	UF-SP-1		↓	1020	↓	X			1	
	UF-UST-SW-N		↓	1118	↓	X			1	
	UF-UST-B		↓	1115	↓	X	X	X	1	
	UF-CB-SW-S		↓	1254	↓	X			1	
	UF-CB-SW-E		↓	1259	↓	X			1	
	UF-CB-SW-N		↓	1256	↓	X			1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE [signature]	3/17/16	SIGNATURE [signature]	03/17/16
PRINT NAME Anne Conrad	TIME	PRINT NAME [illegible]	TIME
COMPANY Hart Crowser	1715	COMPANY AAL	17:25
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

TOTAL NUMBER OF CONTAINERS 12

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

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 and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample Custody Record

2 of 2 C6C317-2 (2)

Samples Shipped to: AAL

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: M. Goodman + A. Conrad

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	pH	13 Metals	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-CB-B		3/17/16	1252	S	X	X	X	1	[illegible]
	UF-UST-SP			1215		X			1	[illegible]
✓	UF-SP-2			1253		X			1	
✓	UF-SP-3		↓	1255	↓	X			1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	3/17/16	SIGNATURE	03/17/16
PRINT NAME Anne Conrad	TIME 17:10	PRINT NAME AAL	TIME 17:10
COMPANY		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

4 TOTAL NUMBER OF CONTAINERS

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

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 and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60317-2
Client:	Hart Crowser, Inc.
Project Manager:	Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	03/17/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	UF-UST-SW-W	UF-UST-SW-S	UF-UST-SW-N
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/17/16	03/17/16	03/17/16	03/17/16
Date analyzed	Limits	03/17/16	03/17/16	03/17/16	03/17/16
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		94%	100%	102%	98%
o-Terphenyl		101%	111%	105%	103%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

NWTPH-Dx, mg/kg		UF-UST-SW-E	UF-UST-B	UF-CB-SW-W	UF-CB-SW-S
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/17/16	03/17/16	03/17/16	03/17/16
Date analyzed	Limits	03/17/16	03/17/16	03/17/16	03/17/16
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		97%	96%	97%	99%
o-Terphenyl		104%	101%	102%	101%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

NWTPH-Dx, mg/kg		UF-CB-SW-E	UF-CB-SW-N	UF-CB-B	UF-SP-1	UF-SP-2	UF-SP-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16
Date analyzed	Limits	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16	03/17/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	580	360	1,700
Heavy oil	50	nd	nd	nd	nd	nd	nd
Surrogate recoveries:							
Fluorobiphenyl		98%	98%	101%	110%	101%	114%
o-Terphenyl		105%	101%	104%	113%	104%	105%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results			Dupl
NWTPH-Dx, mg/kg		**UF-UST-SP**	**UF-UST-SP**
Matrix	Soil	Soil	Soil
Date extracted	Reporting	03/17/16	03/17/16
Date analyzed	Limits	03/17/16	03/17/16
Kerosene/Jet fuel	20	nd	nd
Diesel/Fuel oil	20	nd	nd
Heavy oil	50	nd	nd
Surrogate recoveries:			
Fluorobiphenyl		102%	101%
o-Terphenyl		105%	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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

pH (9045)	UF-S4	UF-S5	UF-UST-B	UF-CB-B
Matrix	Soil	Soil	Soil	Soil
Date analyzed	03/18/16	03/18/16	03/18/16	03/18/16
pH	6.9	7.0	6.8	6.9

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

Moisture, SM2540B	UF-UST-SW-W	UF-UST-SW-S	UF-UST-SW-N	UF-UST-SW-E
Matrix	Soil	Soil	Soil	Soil
Date analyzed	03/18/16	03/18/16	03/18/16	03/18/16
Moisture, %	18%	16%	16%	20%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

Moisture, SM2540B	UF-UST-B	UF-CB-SW-W	UF-CB-SW-S	UF-CB-SW-E	UF-CB-SW-N
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	03/18/16	03/18/16	03/18/16	03/18/16	03/18/16
Moisture, %	13%	12%	13%	12%	12%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60317-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 03/17/16

Analytical Results

Moisture, SM2540B	UF-CB-B	UF-SP-1	UF-SP-2	UF-SP-3	UF-UST-SP	UF-S4	UF-S5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	03/18/16	03/18/16	03/18/16	03/18/16	03/18/16	03/18/16	03/18/16
Moisture, %	14%	13%	13%	12%	14%	14%	13%

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Mar 28 2016
Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov

Dear Val Ivanov:

Enclosed please find the analytical data for your Uptown Flats project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
UF-S4	Soil	16-A004137	CONV, MET, Hg-CV, MET
UF-S5	Soil	16-A004138	CONV, MET, Hg-CV, MET
UF-UST-B	Soil	16-A004139	CONV, MET, Hg-CV, MET
UF-CB-B	Soil	16-A004140	CONV, MET, Hg-CV, MET

Your samples were received on Friday, March 18, 2016. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: C60317-1 190400

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Advanced Analytical
2821 152nd Ave NE
Redmond, WA 98052
Attention: Val Ivanov
Project Name: Uptown Flats
Project #: C60317-1 190400
All results reported on a dry weight basis.

Date Received: 03/18/16
Date Reported: 3/28/16

AMTEST Identification Number **16-A004137**
Client Identification **UF-S4**
Sampling Date **03/17/16**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	86.0	%		0.1	SM 2540B	Sublet	

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	03/18/16
Silver	9.80	ug/g		1.29	EPA 6010C	MH	03/21/16
Arsenic	2.74	ug/g		2.58	EPA 6010C	MH	03/21/16
Beryllium	< 0.129	ug/g		0.129	EPA 6010C	MH	03/21/16
Cadmium	< 0.129	ug/g		0.129	EPA 6010C	MH	03/21/16
Chromium	14.2	ug/g		1.29	EPA 6010C	MH	03/21/16
Copper	19.2	ug/g		1.29	EPA 6010C	MH	03/21/16
Nickel	37.0	ug/g		0.516	EPA 6010C	MH	03/21/16
Lead	20.5	ug/g		2.58	EPA 6010C	MH	03/21/16
Zinc	40.2	ug/g		0.516	EPA 6010C	MH	03/21/16
Antimony	< 0.064	ug/g		0.064	SW-846 6020A	MH	03/22/16
Selenium	0.229	ug/g		0.052	SW-846 6020A	MH	03/19/16
Thallium	0.0644	ug/g		0.064	SW-846 6020A	MH	03/22/16
Mercury	0.0307	ug/g		0.01	SW-846 7471A	AY	03/22/16

AMTEST Identification Number **16-A004138**
Client Identification **UF-S5**
Sampling Date **03/17/16**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	87.0	%		0.1	SM 2540B	Sublet	

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	03/18/16
Silver	9.71	ug/g		1.17	EPA 6010C	MH	03/21/16
Arsenic	3.25	ug/g		2.34	EPA 6010C	MH	03/21/16
Beryllium	< 0.117	ug/g		0.117	EPA 6010C	MH	03/21/16
Cadmium	< 0.117	ug/g		0.117	EPA 6010C	MH	03/21/16
Chromium	15.6	ug/g		1.17	EPA 6010C	MH	03/21/16
Copper	21.5	ug/g		1.17	EPA 6010C	MH	03/21/16
Nickel	26.3	ug/g		0.468	EPA 6010C	MH	03/21/16
Lead	20.3	ug/g		2.34	EPA 6010C	MH	03/21/16
Zinc	47.5	ug/g		0.468	EPA 6010C	MH	03/21/16
Antimony	< 0.0586	ug/g		0.058	SW-846 6020A	MH	03/22/16
Selenium	0.103	ug/g		0.047	SW-846 6020A	MH	03/19/16
Thallium	0.0703	ug/g		0.058	SW-846 6020A	MH	03/22/16
Mercury	0.0245	ug/g		0.01	SW-846 7471A	AY	03/22/16

AMTEST Identification Number **16-A004139**
Client Identification **UF-UST-B**
Sampling Date **03/17/16**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	87.0	%		0.1	SM 2540B	Sublet	

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	03/18/16
Silver	12.6	ug/g		1.12	EPA 6010C	MH	03/21/16
Arsenic	3.83	ug/g		2.24	EPA 6010C	MH	03/21/16
Beryllium	< 0.112	ug/g		0.112	EPA 6010C	MH	03/21/16
Cadmium	< 0.112	ug/g		0.112	EPA 6010C	MH	03/21/16
Chromium	41.8	ug/g		1.12	EPA 6010C	MH	03/21/16
Copper	34.4	ug/g		1.12	EPA 6010C	MH	03/21/16
Nickel	112.	ug/g		0.448	EPA 6010C	MH	03/21/16
Lead	17.4	ug/g		2.24	EPA 6010C	MH	03/21/16
Zinc	50.1	ug/g		0.448	EPA 6010C	MH	03/21/16
Antimony	< 0.0563	ug/g		0.056	SW-846 6020A	MH	03/22/16
Selenium	0.117	ug/g		0.045	SW-846 6020A	MH	03/19/16
Thallium	0.0639	ug/g		0.056	SW-846 6020A	MH	03/22/16
Mercury	0.0501	ug/g		0.01	SW-846 7471A	AY	03/22/16

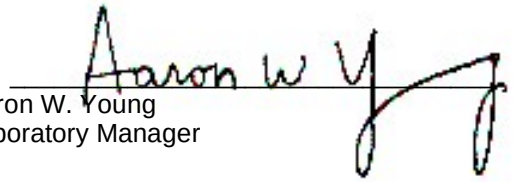
AMTEST Identification Number **16-A004140**
Client Identification **UF-CB-B**
Sampling Date **03/17/16**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	86.0	%		0.1	SM 2540B	Sublet	

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	MH	03/18/16
Silver	6.74	ug/g		0.891	EPA 6010C	MH	03/21/16
Arsenic	2.28	ug/g		1.78	EPA 6010C	MH	03/21/16
Beryllium	< 0.0891	ug/g		0.089	EPA 6010C	MH	03/21/16
Cadmium	< 0.08907	ug/g		0.089	EPA 6010C	MH	03/21/16
Chromium	10.9	ug/g		0.891	EPA 6010C	MH	03/21/16
Copper	15.2	ug/g		0.891	EPA 6010C	MH	03/21/16
Nickel	34.1	ug/g		0.356	EPA 6010C	MH	03/21/16
Lead	9.90	ug/g		1.78	EPA 6010C	MH	03/21/16
Zinc	31.6	ug/g		0.356	EPA 6010C	MH	03/21/16
Antimony	< 0.0442	ug/g		0.045	SW-846 6020A	MH	03/22/16
Selenium	0.0977	ug/g		0.036	SW-846 6020A	MH	03/19/16
Thallium	0.0578	ug/g		0.045	SW-846 6020A	MH	03/22/16
Mercury	0.0238	ug/g		0.01	SW-846 7471A	AY	03/22/16



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 16-A004137 to 16-A004140

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A003604	Arsenic	ug/g	0.16	35.8	34.7	102.81 %
16-A003604	Arsenic	ug/g	0.16	33.2	34.7	95.22 %
16-A004140	Mercury	ug/g	0.0205	0.108	0.0860	101.74 %
16-A004140	Mercury	ug/g	0.0205	0.108	0.0860	101.74 %
16-A003604	Lead	ug/g	0.49	33.1	34.7	94.07 %
16-A003604	Lead	ug/g	0.49	30.7	34.7	87.06 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Arsenic	ug/g	35.8	33.2	7.5
Spike	Mercury	ug/g	0.108	0.108	0.00
Spike	Lead	ug/g	33.1	30.7	7.5

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Silver	ug/g	31.6	35.3	112. %
Arsenic	ug/g	260.	270.	104. %
Beryllium	ug/g	136.	150.	110. %
Cadmium	ug/g	107.0	90.30	84.4 %
Chromium	ug/g	296.	375.	127. %
Copper	ug/g	173.	225.	130. %
Mercury	ug/g	1.00	1.01	101. %
Nickel	ug/g	287.	265.	92.3 %
Lead	ug/g	306.	329.	108. %
Zinc	ug/g	184.	188.	102. %
Antimony	ug/g	25.0	24.2	96.8 %
Selenium	ug/g	87.2	66.8	76.6 %
Thallium	ug/g	25.0	26.1	104. %

BLANKS

ANALYTE	UNITS	RESULT
Silver	ug/g	< 0.005
Arsenic	ug/g	< 0.01
Beryllium	ug/g	< 0.0005
Cadmium	ug/g	< 0.0005
Chromium	ug/g	< 0.005
Copper	ug/g	< 0.005
Mercury	ug/g	< 0.005

QC Summary for sample numbers: 16-A004137 to 16-A004140...

BLANKS continued....

ANALYTE	UNITS	RESULT
Nickel	ug/g	< 0.002
Lead	ug/g	0.01
Zinc	ug/g	< 0.002
Antimony	ug/g	< 0.00005
Selenium	ug/g	0.0014
Thallium	ug/g	< 0.00005

ADVANCED ANALYTICAL

Chain of Custody Record

Page of

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
~~(425) 497-0110 fax (425) 497-8089~~
aachemlab@yahoo.com

P.8

Client: Advanced Analytical Lab

Project Manager: Val Ivanov

Address:

Phone: 425 747-7009 Fax:

Project Name: Uptown Flats

Project Number: C60317-1 (19040-06)

Collector:

Date of collection: 03/17/16

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Metals (PPM)(3)*			Notes, comments	# of containers
1	UF-S4 A137		Soil	4oz													X					1
2	UF-S5 A138		↓	↓													X					1
3	UF-UST-B A139																X					1
4	UF-CB-B A140		↓	↓													X					1
5																					*Sb As Be	
6																					Cd Cr Cu	
7																					Pb Hg Ni	
8																					Se Ag Tl Zn	
9																						
10																					(please report	
11																					Se < 0.5 mg/kg)	
12																					VAI	

Report Results also to: ANNE.CONRAD@HARTCROWSER.COM

Relinquished by:	Date/Time	Received by:	Date/Time
V. Ivanov 03/18/16		M. Hartel	03/18/16 935
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp, °C) 2.1

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day O

24 hr X

48 hr O

Standard O

Please, rush by Monday 03/21/16

ADVANCED ANALYTICAL

Environmental Testing Laboratory

April 08, 2016

Anne Conrad
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Dear Ms. Conrad:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-06* ***(C60407-1)*** Project.

Samples were received on *April 07, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

C604071

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME UPTOWN FLATS

HART CROWSER CONTACT A. Conko
J. Wukelic

SAMPLED BY: AW

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-G/BTEX	NWTPH-Dx	Pb	Hold	PCBs	cPAH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-E-SP1		4/6/16	1650	S	X	X					2	
	UF-E-SP2			1640		X	X					2	⊗ Added by A. Conko 04/07/16 "Rush TAT."
	UF-E-SP3			1700		X	X			⊗	⊗	2	
	UF-D			1625					X			1	VGT

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	4/7/16	V. Ivanov	04/07/16
PRINT NAME Anne Conko	TIME 0900	SIGNATURE VAL IVANOV	TIME
COMPANY Hart Crowser		PRINT NAME AAL	10:45
		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

7 TOTAL NUMBER OF CONTAINERS

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

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 ASAP

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60407-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	04/07/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	UF-E-SP1	UF-E-SP2	UF-E-SP3	UF-E-SP3 Dupl	UF-E-SP3 RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
Date analyzed	Limits	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	
Diesel/Fuel oil	20	nd	2,000	2,300	5,100	5,300	4%
Heavy oil	50	nd	450	660	2,300	2,400	4%
Surrogate recoveries:							
Fluorobiphenyl		110%	114%	125%	C	C	
o-Terphenyl		117%	117%	122%	C	C	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS	UF-E-SP1	UF-E-SP2	UF-E-SP3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
Date analyzed	Limits	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd		nd	nd	nd
Gasoline	5.0	nd		nd	nd	nd
BTEX 8021B, µg/kg						
Benzene	20	nd	74%	nd	nd	nd
Toluene	50	nd	100%	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd
Xylenes	50	nd		nd	nd	nd
Surrogate recoveries:						
Trifluorotoluene		99%	114%	85%	86%	95%
Bromofluorobenzene		114%	115%	99%	107%	117%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results		Dupl	MS	MSD	RPD
NWTPH-Gx / BTEX		**UF-E-SP3**	**UF-E-SP3**	**UF-E-SP3**	**UF-E-SP3**
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/07/16	04/07/16	04/07/16	04/07/16
Date analyzed	Limits	04/07/16	04/07/16	04/07/16	04/07/16
NWTPH-Gx, mg/kg					
Mineral spirits/Stoddard	5.0	nd			
Gasoline	5.0	nd			
BTEX 8021B, µg/kg					
Benzene	20	nd	76%	76%	0%
Toluene	50	nd	111%	110%	1%
Ethylbenzene	50	nd			
Xylenes	50	nd			
Surrogate recoveries:					
Trifluorotoluene		97%	109%	108%	
Bromofluorobenzene		116%	108%	115%	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results

PAH (8270 sim), mg/kg		MTH BLK	LCS	UF-E-SP3	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
Date analyzed	Limits	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16	04/07/16
1-Methylnaphthalene	0.10	nd		9.4			
2-Methylnaphthalene	0.10	nd		7.1			
Naphthalene	0.10	nd		1.6			
Acenaphthylene	0.10	nd		nd			
Acenaphthene	0.10	nd	91%	1.4	92%	91%	1%
Fluorene	0.10	nd		nd			
Phenanthrene	0.10	nd		7.5			
Anthracene	0.10	nd		nd			
Fluoranthene	0.10	nd		1.0			
Pyrene	0.10	nd	79%	1.8	75%	78%	3%
Benzo(a)anthracene	0.10	nd		nd			
Chrysene	0.10	nd		0.40			
Benzo(b)fluoranthene	0.10	nd		nd			
Benzo(k)fluoranthene	0.10	nd		nd			
Benzo(a)pyrene	0.10	nd		nd			
Indeno(1,2,3-cd)pyrene	0.10	nd		nd			
Dibenzo(ah)anthracene	0.10	nd		nd			
Benzo(ghi)perylene	0.10	nd		nd			

Surrogate recoveries:

2-Fluorobyphenyl	100%	98%	112%	105%	103%	
o-Terphenyl	83%	85%	56%	77%	78%	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results					MS	MSD	RPD
8082 (PCBs), mg/kg		**MTH BLK**	**LCS**	**UF-E-SP3**	**UF-E-SP3**	**UF-E-SP3**	**UF-E-SP3**
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/08/16	04/08/16	04/08/16	04/08/16	04/08/16	04/08/16
Date analyzed	Limits	04/08/16	04/08/16	04/08/16	04/08/16	04/08/16	04/08/16
A1221	0.2	nd		nd			
A1232	0.2	nd		nd			
A1242 (A1016)	0.2	nd		nd			
A1248	0.2	nd		nd			
A1254	0.2	nd		nd			
A1260	0.2	nd	70%	nd	121%	126%	4%
Surrogate recoveries:							
Tetrachloro-m-xylene		84%	105%	76%	103%	109%	
Decachlorobiphenyl		86%	114%	82%	105%	103%	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60407-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/07/16

Analytical Results

Moisture, SM2540B	UF-E-SP1	UF-E-SP2	UF-E-SP3
Matrix	Soil	Soil	Soil
Date analyzed	04/07/16	04/07/16	04/07/16
Moisture, %	13%	12%	13%

ADVANCED ANALYTICAL

Environmental Testing Laboratory

April 11, 2016

Anne Conrad
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Dear Ms. Conrad:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-06* ***(C60408-2)*** Project.

Samples were received on *April 08, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

C60408-2

~~B5C1~~

Samples Shipped to: AAL

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: MKG

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	REQUESTED ANALYSIS: PAHs	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-D-SP1		4/8/16	1255	S	X		2	
	UF-D-SP2			1300		X		2	
	UF-D-SP3			1305		X		2	
	UF-D-N			1345		X	X	2	
	UF-D-E			1315		X	X	2	
	UF-D-S			1330		X	X	2	
	UF-D-W			1400		X	X	2	
	UF-D-B			1415		X	X	2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	4/8/16	SIGNATURE	04/08/16
PRINT NAME Marsia Goodman	TIME	PRINT NAME	TIME
COMPANY Hart Crowser	1600	COMPANY AAL	17:10
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

16 TOTAL NUMBER OF CONTAINERS

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

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 Same day

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60408-2
Client:	Hart Crowser, Inc.
Project Manager:	Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	04/08/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60408-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/08/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	UF-D-SP1	UF-D-SP2	UF-D-SP3	UF-D-SP3 Dupl	UF-D-N
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16
Date analyzed	Limits	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	89	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd
Surrogate recoveries:							
Fluorobiphenyl		110%	112%	104%	113%	112%	113%
o-Terphenyl		116%	116%	114%	117%	115%	122%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60408-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/08/16

Analytical Results

NWTPH-Dx, mg/kg		UF-D-E	UF-D-S	UF-D-W	UF-D-B
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/10/16	04/10/16	04/10/16	04/10/16
Date analyzed	Limits	04/10/16	04/10/16	04/10/16	04/10/16
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%	111%	112%	112%
o-Terphenyl		109%	114%	115%	119%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60408-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/08/16

Analytical Results

PAH (8270 sim), mg/kg		MTH BLK	LCS	UF-D-N	UF-D-E	UF-D-S	UF-D-W	UF-D-B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16
Date analyzed	Limits	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16	04/10/16
1-Methylnaphthalene	0.10	nd		nd	nd	nd	nd	nd
2-Methylnaphthalene	0.10	nd		nd	nd	nd	nd	nd
Naphthalene	0.10	nd		nd	nd	nd	nd	nd
Acenaphthylene	0.10	nd		nd	nd	nd	nd	nd
Acenaphthene	0.10	nd	88%	nd	nd	nd	nd	nd
Fluorene	0.10	nd		nd	nd	nd	nd	nd
Phenanthrene	0.10	nd		nd	nd	nd	nd	nd
Anthracene	0.10	nd		nd	nd	nd	nd	nd
Fluoranthene	0.10	nd		nd	nd	nd	nd	nd
Pyrene	0.10	nd	73%	nd	nd	nd	nd	nd
Benzo(a)anthracene	0.10	nd		nd	nd	nd	nd	nd
Chrysene	0.10	nd		nd	nd	nd	nd	nd
Benzo(b)fluoranthene	0.10	nd		nd	nd	nd	nd	nd
Benzo(k)fluoranthene	0.10	nd		nd	nd	nd	nd	nd
Benzo(a)pyrene	0.10	nd		nd	nd	nd	nd	nd
Indeno(1,2,3-cd)pyren	0.10	nd		nd	nd	nd	nd	nd
Dibenzo(ah)anthracen	0.10	nd		nd	nd	nd	nd	nd
Benzo(ghi)perylene	0.10	nd		nd	nd	nd	nd	nd
Surrogate recoveries:								
2-Fluorobyphenyl		101%	98%	99%	105%	99%	102%	104%
o-Terphenyl		85%	87%	82%	83%	80%	81%	80%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60408-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/08/16

Analytical Results		MS	MSD	RPD
PAH (8270 sim), mg/kg		**UF-D-B**	**UF-D-B**	**UF-D-B**
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/10/16	04/10/16	04/10/16
Date analyzed	Limits	04/10/16	04/10/16	04/10/16
1-Methylnaphthalene	0.10			
2-Methylnaphthalene	0.10			
Naphthalene	0.10			
Acenaphthylene	0.10			
Acenaphthene	0.10	89%	85%	5%
Fluorene	0.10			
Phenanthrene	0.10			
Anthracene	0.10			
Fluoranthene	0.10			
Pyrene	0.10	74%	70%	6%
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)pyren	0.10			
Dibenzo(ah)anthracen	0.10			
Benzo(ghi)perylene	0.10			
Surrogate recoveries:				
2-Fluorobyphenyl		96%	99%	
o-Terphenyl		79%	81%	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60408-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/08/16

Analytical Results

Moisture, SM2540B	UF-D-SP1	UF-D-SP2	UF-D-SP3	UF-D-N	UF-D-E	UF-D-S	UF-D-W	UF-D-B
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date analyzed	04/11/16	04/11/16	04/11/16	04/11/16	04/11/16	04/11/16	04/11/16	04/11/16
Moisture, %	29%	16%	18%	16%	12%	22%	16%	11%

ADVANCED ANALYTICAL

Environmental Testing Laboratory

April 19, 2016

Anne Conrad
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Dear Ms. Conrad:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-06* ***(C60414-1)*** Project.

Samples were received on *April 14, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

C604/4-1

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: M. Goodman

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
~~MG~~	~~UF-F-SW-S~~		~~4/13/16~~		~~S~~			
	UF-F-SW-S		4/13/16	1520	S	X	2	
	UF-F-SW-E		4/13/16	1505	S	X	1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Marissa Goodman	4/13/16	SIGNATURE: V. Ivanov	04/14/16
PRINT NAME: Marissa Goodman	TIME	PRINT NAME: VAL IVANOV	TIME
COMPANY: Hart Crowser	1700	COMPANY: AAL	10:10
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

3 TOTAL NUMBER OF CONTAINERS

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

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 and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60414-1
Client:	Hart Crowser, Inc.
Project Manager:	Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	04/14/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60414-1
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/14/16

Analytical Results					Dupl	RPD
NWTPH-Dx, mg/kg		**MTH BLK**	**UF-F-SW-S**	**UF-F-SW-E**	**UF-F-SW-E**	**UF-F-SW-E**
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/14/16	04/14/16	04/14/16	04/14/16	04/14/16
Date analyzed	Limits	04/14/16	04/14/16	04/14/16	04/14/16	04/14/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	
Diesel/Fuel oil	20	nd	nd	2,100	2,100	0%
Heavy oil	50	nd	nd	nd	nd	
Surrogate recoveries:						
Fluorobiphenyl		125%	122%	124%	125%	
o-Terphenyl		127%	117%	C	C	

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60414-1
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/14/16

Analytical Results

Moisture, SM2540B	UF-F-SW-S	UF-F-SW-E
Matrix	Soil	Soil
Date analyzed	04/15/16	04/15/16
Moisture, %	10%	12%

ADVANCED ANALYTICAL

Environmental Testing Laboratory

April 19, 2016

Anne Conrad
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Dear Ms. Conrad:

Please find enclosed the analytical data report for the *Uptown Flats, 19040-06* ***(C60415-2)*** Project.

Samples were received on *April 15, 18, 2016*. 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) 747-7009.

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

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

13256 NE 20th Street, Suite 8 ■ Bellevue, WA 98005
ph 425.747.7009
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

C604152 (1)

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: M. Goodman

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-F-B		4/13/16	1510	Soil	X	1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	4/15/16	SIGNATURE	4/15/16
PRINT NAME Marissa Goodman	TIME	PRINT NAME	TIME
COMPANY Hart Crowser	1500	COMPANY AAL	15:15
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

1 TOTAL NUMBER OF CONTAINERS

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

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 and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample Custody Record

C60415-2 (2)

Samples Shipped to: AAL

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • **Fax** 206.328.5581

JOB 19040-06 LAB NUMBER

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: A. Wade

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-F-SW-N	N	4/15/16	1505	SOIL	X	1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	4/18/16	V. Ivanov	04/18/16
PRINT NAME Marissa Goodman	TIME	SIGNATURE Val Ivanov	TIME
COMPANY Hart Crowser	0900	PRINT NAME AAL	10:00
		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

1 TOTAL NUMBER OF CONTAINERS

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

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

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Advanced Analytical Laboratory
(425)497-0110, fax(425)497-8089

AAL Job Number:	C60415-2
Client:	Hart Crowser, Inc.
Project Manager:	Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	04/15,18/16

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: C60415-2
Client: Hart Crowser, Inc.
Project Manager: Anne Conrad
Client Project Name: Uptown Flats
Client Project Number: 19040-06
Date received: 04/15,18/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	UF-F-B	UF-F-SW-N	Dupl UF-F-SW-N
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/19/16	04/19/16	04/19/16	04/19/16
Date analyzed	Limits	04/19/16	04/19/16	04/19/16	04/19/16
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		128%	130%	128%	129%
o-Terphenyl		123%	124%	121%	122%

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%

Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number:	C60415-2
Client:	Hart Crowser, Inc.
Project Manager:	Anne Conrad
Client Project Name:	Uptown Flats
Client Project Number:	19040-06
Date received:	04/15,18/16

Analytical Results

Moisture, SM2540B	UF-F-B	UF-F-SW-N
Matrix	Soil	Soil
Date analyzed	04/20/16	04/20/16
Moisture, %	10%	12%

Laboratory Reports
Fremont Analytical

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

Hart Crowser, Inc.
Anne Conrad
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: Uptown Flats
Lab ID: 1603286

March 29, 2016

Attention Anne Conrad:

Fremont Analytical, Inc. received 5 sample(s) on 3/25/2016 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Mercury by EPA Method 7471
pH by EPA Method 9045
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

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
President

Date: *03/29/2016*

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats
Lab Order: 1603286

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1603286-001	UF-CW	03/25/2016 2:00 PM	03/25/2016 4:32 PM
1603286-002	UF-CS	03/25/2016 2:00 PM	03/25/2016 4:32 PM
1603286-003	UF-CE	03/25/2016 1:55 PM	03/25/2016 4:32 PM
1603286-004	UF-CN	03/25/2016 1:50 PM	03/25/2016 4:32 PM
1603286-005	UF-CB	03/25/2016 1:45 PM	03/25/2016 4:32 PM

Revision v1

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1603286**
Date: **3/29/2016**

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

WO#: **1603286**
Date Reported: **3/29/2016**

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

Lab ID: 1603286-001 **Collection Date:** 3/25/2016 2:00:00 PM
Client Sample ID: **UF-CW** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 13299		Analyst: AK
Diesel (Fuel Oil)	ND	21.2		mg/Kg-dry	1	3/26/2016 11:32:00 AM
Heavy Oil	ND	53.1		mg/Kg-dry	1	3/26/2016 11:32:00 AM
Surr: 2-Fluorobiphenyl	89.0	50-150		%Rec	1	3/26/2016 11:32:00 AM
Surr: o-Terphenyl	88.6	50-150		%Rec	1	3/26/2016 11:32:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	9.24	0.500		wt%	1	3/28/2016 8:01:39 AM

Lab ID: 1603286-002 **Collection Date:** 3/25/2016 2:00:00 PM
Client Sample ID: **UF-CS** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 13299		Analyst: AK
Diesel (Fuel Oil)	ND	21.6		mg/Kg-dry	1	3/26/2016 12:03:00 PM
Heavy Oil	ND	53.9		mg/Kg-dry	1	3/26/2016 12:03:00 PM
Surr: 2-Fluorobiphenyl	102	50-150		%Rec	1	3/26/2016 12:03:00 PM
Surr: o-Terphenyl	99.5	50-150		%Rec	1	3/26/2016 12:03:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	8.18	0.500		wt%	1	3/28/2016 8:01:39 AM

Analytical Report

WO#: **1603286**
Date Reported: **3/29/2016**

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

Lab ID: 1603286-003 **Collection Date:** 3/25/2016 1:55:00 PM
Client Sample ID: **UF-CE** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 13299		Analyst: AK
Diesel (Fuel Oil)	ND	22.3		mg/Kg-dry	1	3/26/2016 12:34:00 PM
Heavy Oil	ND	55.7		mg/Kg-dry	1	3/26/2016 12:34:00 PM
Surr: 2-Fluorobiphenyl	95.6	50-150		%Rec	1	3/26/2016 12:34:00 PM
Surr: o-Terphenyl	95.1	50-150		%Rec	1	3/26/2016 12:34:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	12.0	0.500		wt%	1	3/28/2016 8:01:39 AM

Lab ID: 1603286-004 **Collection Date:** 3/25/2016 1:50:00 PM
Client Sample ID: **UF-CN** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 13299		Analyst: AK
Diesel (Fuel Oil)	ND	24.5		mg/Kg-dry	1	3/26/2016 1:05:00 PM
Heavy Oil	ND	61.3		mg/Kg-dry	1	3/26/2016 1:05:00 PM
Surr: 2-Fluorobiphenyl	105	50-150		%Rec	1	3/26/2016 1:05:00 PM
Surr: o-Terphenyl	104	50-150		%Rec	1	3/26/2016 1:05:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	19.6	0.500		wt%	1	3/28/2016 8:01:39 AM

Analytical Report

WO#: **1603286**
Date Reported: **3/29/2016**

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

Lab ID: 1603286-005 **Collection Date:** 3/25/2016 1:45:00 PM
Client Sample ID: **UF-CB** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 13299		Analyst: AK
Diesel (Fuel Oil)	ND	22.3		mg/Kg-dry	1	3/26/2016 1:36:00 PM
Heavy Oil	ND	55.7		mg/Kg-dry	1	3/26/2016 1:36:00 PM
Surr: 2-Fluorobiphenyl	109	50-150		%Rec	1	3/26/2016 1:36:00 PM
Surr: o-Terphenyl	107	50-150		%Rec	1	3/26/2016 1:36:00 PM
Mercury by EPA Method 7471				Batch ID: 13307		Analyst: TN
Mercury	ND	0.199		mg/Kg-dry	1	3/28/2016 10:58:23 AM
Total Metals by EPA Method 6020				Batch ID: 13303		Analyst: TN
Antimony	ND	0.169		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Arsenic	2.05	0.0845		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Beryllium	ND	0.169		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Cadmium	ND	0.169		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Chromium	29.4	0.0845		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Copper	10.8	0.169		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Lead	1.67	0.169		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Nickel	29.6	0.0845		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Selenium	0.656	0.422		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Silver	ND	0.0845		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Thallium	ND	0.169		mg/Kg-dry	1	3/28/2016 3:17:54 PM
Zinc	24.7	0.338		mg/Kg-dry	1	3/25/2016 7:17:43 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	10.3	0.500		wt%	1	3/28/2016 8:01:39 AM
pH by EPA Method 9045				Batch ID: R28442		Analyst: SB
Hydrogen Ion (pH)	7.34			pH	1	3/28/2016 8:18:24 AM

Revision v1

Date: *3/29/2016*

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID **MB-R28442**	SampType: **MBLK**			Units: **pH**		Prep Date: **3/28/2016**			RunNo: **28442**		
Client ID: **MBLKS**	Batch ID: **R28442**					Analysis Date: **3/28/2016**			SeqNo: **534247**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	8.61										

Sample ID **LCS-R28442**	SampType: **LCS**			Units: **pH**		Prep Date: **3/28/2016**			RunNo: **28442**		
Client ID: **LCSS**	Batch ID: **R28442**					Analysis Date: **3/28/2016**			SeqNo: **534248**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.05		7.000	0	101	95	105				

Sample ID **1603285-001ADUP**	SampType: **DUP**			Units: **pH**		Prep Date: **3/28/2016**			RunNo: **28442**		
Client ID: **BATCH**	Batch ID: **R28442**					Analysis Date: **3/28/2016**			SeqNo: **534250**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	6.52							6.470	0.770	10	

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **MB-13303** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **MBLKS** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.200									
Arsenic	ND	0.100									
Beryllium	ND	0.200									
Cadmium	ND	0.200									
Chromium	ND	0.100									
Copper	ND	0.200									
Lead	ND	0.200									
Nickel	ND	0.100									
Selenium	ND	0.500									
Silver	ND	0.100									
Zinc	ND	0.400									

Sample ID **LCS-13303** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **LCSS** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534222**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.45	0.200	2.500	0	98.0	80	120				
Arsenic	49.5	0.100	50.00	0	98.9	80	120				
Beryllium	2.44	0.200	2.500	0	97.6	80	120				
Cadmium	2.70	0.200	2.500	0	108	80	120				
Chromium	50.3	0.100	50.00	0	101	80	120				
Copper	51.0	0.200	50.00	0	102	80	120				
Lead	25.1	0.200	25.00	0	100	80	120				
Nickel	50.9	0.100	50.00	0	102	80	120				
Selenium	4.67	0.500	5.000	0	93.5	80	120				
Silver	2.73	0.100	2.500	0	109	80	120				
Zinc	52.4	0.400	50.00	0	105	80	120				

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **1603284-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534224**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.371	0.174						0.4894	27.5	20	
Arsenic	5.42	0.0871						5.808	6.96	20	
Beryllium	0.258	0.174						0.2930	12.7	20	
Cadmium	ND	0.174						0		20	
Chromium	14.5	0.0871						15.59	7.58	20	
Copper	32.9	0.174						39.96	19.5	20	
Lead	24.7	0.174						30.68	21.6	20	R
Nickel	11.4	0.0871						12.80	11.4	20	
Selenium	1.10	0.435						1.277	14.8	20	
Silver	ND	0.0871						0		20	
Zinc	53.6	0.348						50.84	5.30	20	

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

Sample ID **1603284-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534226**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.20	0.181	2.258	0.4894	31.4	75	125				S
Arsenic	52.3	0.0903	45.16	5.808	103	75	125				
Beryllium	3.28	0.181	2.258	0.2930	132	75	125				S
Cadmium	2.44	0.181	2.258	0.1367	102	75	125				
Chromium	70.1	0.0903	45.16	15.59	121	75	125				
Copper	80.3	0.181	45.16	39.96	89.4	75	125				
Lead	35.5	0.181	22.58	30.68	21.2	75	125				S
Nickel	60.3	0.0903	45.16	12.80	105	75	125				
Selenium	5.49	0.452	4.516	1.277	93.4	75	125				
Silver	1.75	0.0903	2.258	0.04608	75.5	75	125				
Zinc	89.6	0.361	45.16	50.84	85.8	75	125				

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **1603284-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534226**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed for Sb & Be. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying spike recovery observed for Pb. A duplicate analysis was performed and recovered within range.

Sample ID **1603284-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534227**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.23	0.174	2.177	0.4894	34.0	75	125	1.199	2.49	20	S
Arsenic	49.6	0.0871	43.53	5.808	101	75	125	52.31	5.36	20	
Beryllium	3.21	0.174	2.177	0.2930	134	75	125	3.280	2.28	20	S
Cadmium	2.37	0.174	2.177	0.1367	103	75	125	2.439	2.67	20	
Chromium	64.6	0.0871	43.53	15.59	113	75	125	70.11	8.15	20	
Copper	85.2	0.174	43.53	39.96	104	75	125	80.31	5.86	20	
Lead	53.1	0.174	21.77	30.68	103	75	125	35.46	39.8	20	R
Nickel	59.6	0.0871	43.53	12.80	107	75	125	60.32	1.23	20	
Selenium	5.19	0.435	4.353	1.277	89.8	75	125	5.494	5.75	20	
Silver	1.63	0.0871	2.177	0.04608	72.9	75	125	1.750	6.98	20	S
Zinc	97.5	0.348	43.53	50.84	107	75	125	89.56	8.50	20	

NOTES:
S - Outlying spike recovery observed for Sb & Be. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying spike recovery observed for Ag. A duplicate analysis was performed and recovered within range.
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID **1603284-001APDS** SampType: **PDS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534228**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.70	0.179	2.24	0.489	98.7	80	120				
Beryllium	3.33	0.179	2.24	0.293	135	80	120				S

NOTES:
S - Spike recovery indicates a possible matrix effect. The method is in control as indicated by the Laboratory Control Sample (LCS).

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**MB-13303**	SampType:	**MBLK**			Units:	**mg/Kg**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**MBLKS**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534525**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.200									

Sample ID	**LCS-13303**	SampType:	**LCS**			Units:	**mg/Kg**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**LCSS**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534526**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.20	0.200	1.250	0	96.0	80	120				

Sample ID	**1603284-001ADUP**	SampType:	**DUP**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534528**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.174						0		20	

Sample ID	**1603284-001AMS**	SampType:	**MS**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534533**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.08	0.181	1.129	0.05432	90.5	75	125				

Sample ID	**1603284-001AMSD**	SampType:	**MSD**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534534**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.09	0.174	1.088	0.05432	94.7	75	125	1.076	0.879	20	

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID	**MB-13307**	SampType:	**MBLK**			Units:	**mg/Kg**	Prep Date:	**3/28/2016**		RunNo:	**28451**	
Client ID:	**MBLKS**	Batch ID:	**13307**					Analysis Date:	**3/28/2016**		SeqNo:	**534406**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		ND	0.200										

Sample ID	**LCS-13307**	SampType:	**LCS**			Units:	**mg/Kg**	Prep Date:	**3/28/2016**		RunNo:	**28451**	
Client ID:	**LCSS**	Batch ID:	**13307**					Analysis Date:	**3/28/2016**		SeqNo:	**534407**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		0.489	0.200	0.5000	0	97.8	80	120					

Sample ID	**1603284-001ADUP**	SampType:	**DUP**			Units:	**mg/Kg-dry**	Prep Date:	**3/28/2016**		RunNo:	**28451**	
Client ID:	**BATCH**	Batch ID:	**13307**					Analysis Date:	**3/28/2016**		SeqNo:	**534409**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		ND	0.212						0		20		

Sample ID	**1603284-001AMS**	SampType:	**MS**			Units:	**mg/Kg-dry**	Prep Date:	**3/28/2016**		RunNo:	**28451**	
Client ID:	**BATCH**	Batch ID:	**13307**					Analysis Date:	**3/28/2016**		SeqNo:	**534410**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		0.584	0.224	0.5603	0.03844	97.3	70	130					

Sample ID	**1603284-001AMSD**	SampType:	**MSD**			Units:	**mg/Kg-dry**	Prep Date:	**3/28/2016**		RunNo:	**28451**	
Client ID:	**BATCH**	Batch ID:	**13307**					Analysis Date:	**3/28/2016**		SeqNo:	**534411**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		0.576	0.216	0.5403	0.03844	99.5	70	130	0.5838	1.36	20		

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **MB-13299**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **3/25/2016**		RunNo: **28448**		
Client ID: **MBLKS**	Batch ID: **13299**					Analysis Date: **3/26/2016**		SeqNo: **534362**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	19.8		20.00		98.9	50	150				
Surr: o-Terphenyl	19.6		20.00		97.9	50	150				

Sample ID **LCS-13299**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **3/25/2016**		RunNo: **28448**		
Client ID: **LCSS**	Batch ID: **13299**					Analysis Date: **3/26/2016**		SeqNo: **534361**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	402	20.0	500.0	0	80.4	65	135				
Surr: 2-Fluorobiphenyl	20.4		20.00		102	50	150				
Surr: o-Terphenyl	19.2		20.00		96.0	50	150				

Sample ID **1603269-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **3/25/2016**		RunNo: **28448**		
Client ID: **BATCH**	Batch ID: **13299**					Analysis Date: **3/26/2016**		SeqNo: **534333**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	23.1						0		30	
Heavy Oil	ND	57.7						0		30	
Surr: 2-Fluorobiphenyl	22.1		23.08		96.0	50	150		0		
Surr: o-Terphenyl	22.0		23.08		95.3	50	150		0		

Sample ID **1603269-002AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **3/25/2016**		RunNo: **28448**		
Client ID: **BATCH**	Batch ID: **13299**					Analysis Date: **3/26/2016**		SeqNo: **534335**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	400	20.8	520.9	4.359	75.9	65	135				
Surr: 2-Fluorobiphenyl	19.8		20.84		95.2	50	150				
Surr: o-Terphenyl	18.8		20.84		90.2	50	150				

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **1603269-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28448**
Client ID: **BATCH** Batch ID: **13299** Analysis Date: **3/26/2016** SeqNo: **534335**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1603269-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28448**
Client ID: **BATCH** Batch ID: **13299** Analysis Date: **3/26/2016** SeqNo: **534347**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	426	21.8	546.1	4.359	77.1	65	135	399.6	6.28	30	
Surr: 2-Fluorobiphenyl	21.0		21.84		96.2	50	150		0	0	
Surr: o-Terphenyl	20.6		21.84		94.2	50	150		0	0	

Sample ID **1603269-011ADUP** SampType: **DUP** Units: **mg/Kg** Prep Date: **3/25/2016** RunNo: **28448**
Client ID: **BATCH** Batch ID: **13299** Analysis Date: **3/26/2016** SeqNo: **534345**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	19.8						0		30	
Heavy Oil	ND	49.6						0		30	
Surr: 2-Fluorobiphenyl	22.0		19.84		111	50	150		0		
Surr: o-Terphenyl	21.8		19.84		110	50	150		0		

Date: *3/29/2016*

Work Order: 1603286
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1603284-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/28/2016** RunNo: **28441**
Client ID: **BATCH** Batch ID: **R28441** Analysis Date: **3/28/2016** SeqNo: **534238**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.9	0.500						17.37	13.7	20	

Sample Log-In Check List

Client Name:	**HART**	Work Order Number:	**1603286**
Logged by:	**Clare Griggs**	Date Received:	**3/25/2016 4:32:00 PM**

Chain of Custody

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

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 ☐
		Unknown prior to receipt.		
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐
		Samples received straight from field.		
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	12.5
Sample	15.8
Temp Blank	14.4

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

Sample Custody Record

Samples Shipped to: _____

HARTCROWSER 160328016

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 19040-06 LAB NUMBER _____
PROJECT NAME Uptown Flats
HART CROWSER CONTACT Anne Conrad
SAMPLED BY: Andy Wade 425-213-9937

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: DX	13 Metals	RH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-CW		3/25/16	14:00	S	X			1	
	UF-CS		3/25/16	14:00	S	X			1	
	UF-CE		3/25/16	13:55	S	X			1	
	UF-CN		3/25/16	13:50	S	X			1	
	UF-CB		3/25/16	13:45	S	X	X	X	1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	3/25/16	SIGNATURE Bill	3/25/16
PRINT NAME ANDY WADE	TIME	PRINT NAME	TIME 1600
COMPANY Hart Crowser		COMPANY Fai	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Bill K	3/25/16	SIGNATURE	3/25/16
PRINT NAME Fai	TIME 1630	PRINT NAME	TIME 1632
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

COOLER NO.: STORAGE LOCATION: R4

See Lab Work Order No. _____ for Other Contract Requirements

5 TOTAL NUMBER OF CONTAINERS

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

TURNAROUND TIME:
☑ 24 HOURS ☐ 1 WEEK /compass
☐ 48 HOURS ☐ STANDARD
☐ 72 HOURS OTHER _____

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

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

Hart Crowser, Inc.
Anne Conrad
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: Uptown Flats
Lab ID: 1603285

March 29, 2016

Attention Anne Conrad:

Fremont Analytical, Inc. received 2 sample(s) on 3/25/2016 for the analyses presented in the following report.

Mercury by EPA Method 7471
pH by EPA Method 9045
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

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
President

Date: *03/29/2016*

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats
Lab Order: 1603285

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1603285-001	UF-S11	03/25/2016 11:45 AM	03/25/2016 4:32 PM
1603285-002	UF-S12	03/25/2016 12:20 PM	03/25/2016 4:32 PM

Revision v1

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1603285**

Date: **3/29/2016**

CLIENT: Hart Crowser, Inc.

Project: Uptown Flats

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

WO#: **1603285**

Date Reported: **3/29/2016**

Client: Hart Crowser, Inc.

Collection Date: 3/25/2016 11:45:00 AM

Project: Uptown Flats

Lab ID: 1603285-001

Matrix: Soil

Client Sample ID: **UF-S11**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13307		Analyst: TN
Mercury	ND	0.200		mg/Kg-dry	1	3/28/2016 10:51:50 AM
Total Metals by EPA Method 6020				Batch ID: 13303		Analyst: TN
Antimony	0.201	0.172		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Arsenic	4.21	0.0861		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Beryllium	0.227	0.172		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Cadmium	ND	0.172		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Chromium	32.5	0.0861		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Copper	16.5	0.172		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Lead	36.1	0.172		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Nickel	33.2	0.0861		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Selenium	1.08	0.431		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Silver	ND	0.0861		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Thallium	ND	0.172		mg/Kg-dry	1	3/28/2016 3:10:49 PM
Zinc	66.2	0.344		mg/Kg-dry	1	3/25/2016 7:03:31 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	15.2			wt%	1	3/28/2016 8:01:39 AM
pH by EPA Method 9045				Batch ID: R28442		Analyst: SB
Hydrogen Ion (pH)	6.47			pH	1	3/28/2016 8:18:24 AM

Analytical Report

WO#: **1603285**

Date Reported: **3/29/2016**

Client: Hart Crowser, Inc.

Collection Date: 3/25/2016 12:20:00 PM

Project: Uptown Flats

Lab ID: 1603285-002

Matrix: Soil

Client Sample ID: **UF-S12**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13307		Analyst: TN
Mercury	ND	0.200		mg/Kg-dry	1	3/28/2016 10:56:41 AM
Total Metals by EPA Method 6020				Batch ID: 13303		Analyst: TN
Antimony	ND	0.173		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Arsenic	2.18	0.0866		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Beryllium	0.237	0.173		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Cadmium	ND	0.173		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Chromium	44.4	0.0866		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Copper	24.2	0.173		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Lead	2.25	0.173		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Nickel	40.1	0.0866		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Selenium	1.16	0.433		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Silver	ND	0.0866		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Thallium	ND	0.173		mg/Kg-dry	1	3/28/2016 3:14:21 PM
Zinc	28.3	0.346		mg/Kg-dry	1	3/25/2016 7:14:11 PM
Sample Moisture (Percent Moisture)				Batch ID: R28441		Analyst: SB
Percent Moisture	17.5			wt%	1	3/28/2016 8:01:39 AM
pH by EPA Method 9045				Batch ID: R28442		Analyst: SB
Hydrogen Ion (pH)	6.80			pH	1	3/28/2016 8:18:24 AM

Revision v1

Date: *3/29/2016*

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID	**MB-R28442**	SampType:	**MBLK**		Units:	**pH**		Prep Date:	**3/28/2016**		RunNo:	**28442**	
Client ID:	**MBLKS**	Batch ID:	**R28442**					Analysis Date:	**3/28/2016**		SeqNo:	**534247**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hydrogen Ion (pH)		8.61											

Sample ID	**LCS-R28442**	SampType:	**LCS**		Units:	**pH**		Prep Date:	**3/28/2016**		RunNo:	**28442**	
Client ID:	**LCSS**	Batch ID:	**R28442**					Analysis Date:	**3/28/2016**		SeqNo:	**534248**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hydrogen Ion (pH)		7.05		7.000	0	101	95	105					

Sample ID	**1603285-001ADUP**	SampType:	**DUP**		Units:	**pH**		Prep Date:	**3/28/2016**		RunNo:	**28442**	
Client ID:	**UF-S11**	Batch ID:	**R28442**					Analysis Date:	**3/28/2016**		SeqNo:	**534250**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hydrogen Ion (pH)		6.52							6.470	0.770	10		

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **MB-13303** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **MBLKS** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.200									
Arsenic	ND	0.100									
Beryllium	ND	0.200									
Cadmium	ND	0.200									
Chromium	ND	0.100									
Copper	ND	0.200									
Lead	ND	0.200									
Nickel	ND	0.100									
Selenium	ND	0.500									
Silver	ND	0.100									
Zinc	ND	0.400									

Sample ID **LCS-13303** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **LCSS** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534222**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.45	0.200	2.500	0	98.0	80	120				
Arsenic	49.5	0.100	50.00	0	98.9	80	120				
Beryllium	2.44	0.200	2.500	0	97.6	80	120				
Cadmium	2.70	0.200	2.500	0	108	80	120				
Chromium	50.3	0.100	50.00	0	101	80	120				
Copper	51.0	0.200	50.00	0	102	80	120				
Lead	25.1	0.200	25.00	0	100	80	120				
Nickel	50.9	0.100	50.00	0	102	80	120				
Selenium	4.67	0.500	5.000	0	93.5	80	120				
Silver	2.73	0.100	2.500	0	109	80	120				
Zinc	52.4	0.400	50.00	0	105	80	120				

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **1603284-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534224**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.371	0.174						0.4894	27.5	20	
Arsenic	5.42	0.0871						5.808	6.96	20	
Beryllium	0.258	0.174						0.2930	12.7	20	
Cadmium	ND	0.174						0		20	
Chromium	14.5	0.0871						15.59	7.58	20	
Copper	32.9	0.174						39.96	19.5	20	
Lead	24.7	0.174						30.68	21.6	20	R
Nickel	11.4	0.0871						12.80	11.4	20	
Selenium	1.10	0.435						1.277	14.8	20	
Silver	ND	0.0871						0		20	
Zinc	53.6	0.348						50.84	5.30	20	

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

Sample ID **1603284-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534226**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.20	0.181	2.258	0.4894	31.4	75	125				S
Arsenic	52.3	0.0903	45.16	5.808	103	75	125				
Beryllium	3.28	0.181	2.258	0.2930	132	75	125				S
Cadmium	2.44	0.181	2.258	0.1367	102	75	125				
Chromium	70.1	0.0903	45.16	15.59	121	75	125				
Copper	80.3	0.181	45.16	39.96	89.4	75	125				
Lead	35.5	0.181	22.58	30.68	21.2	75	125				S
Nickel	60.3	0.0903	45.16	12.80	105	75	125				
Selenium	5.49	0.452	4.516	1.277	93.4	75	125				
Silver	1.75	0.0903	2.258	0.04608	75.5	75	125				
Zinc	89.6	0.361	45.16	50.84	85.8	75	125				

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID **1603284-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534226**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed for Sb & Be. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying spike recovery observed for Pb. A duplicate analysis was performed and recovered within range.

Sample ID **1603284-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534227**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.23	0.174	2.177	0.4894	34.0	75	125	1.199	2.49	20	S
Arsenic	49.6	0.0871	43.53	5.808	101	75	125	52.31	5.36	20	
Beryllium	3.21	0.174	2.177	0.2930	134	75	125	3.280	2.28	20	S
Cadmium	2.37	0.174	2.177	0.1367	103	75	125	2.439	2.67	20	
Chromium	64.6	0.0871	43.53	15.59	113	75	125	70.11	8.15	20	
Copper	85.2	0.174	43.53	39.96	104	75	125	80.31	5.86	20	
Lead	53.1	0.174	21.77	30.68	103	75	125	35.46	39.8	20	R
Nickel	59.6	0.0871	43.53	12.80	107	75	125	60.32	1.23	20	
Selenium	5.19	0.435	4.353	1.277	89.8	75	125	5.494	5.75	20	
Silver	1.63	0.0871	2.177	0.04608	72.9	75	125	1.750	6.98	20	S
Zinc	97.5	0.348	43.53	50.84	107	75	125	89.56	8.50	20	

NOTES:
S - Outlying spike recovery observed for Sb & Be. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying spike recovery observed for Ag. A duplicate analysis was performed and recovered within range.
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID **1603284-001APDS** SampType: **PDS** Units: **mg/Kg-dry** Prep Date: **3/25/2016** RunNo: **28440**
Client ID: **BATCH** Batch ID: **13303** Analysis Date: **3/25/2016** SeqNo: **534228**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.70	0.179	2.24	0.489	98.7	80	120				
Beryllium	3.33	0.179	2.24	0.293	135	80	120				S

NOTES:
S - Spike recovery indicates a possible matrix effect. The method is in control as indicated by the Laboratory Control Sample (LCS).

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	**MB-13303**	SampType:	**MBLK**			Units:	**mg/Kg**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**MBLKS**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534525**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.200									

Sample ID	**LCS-13303**	SampType:	**LCS**			Units:	**mg/Kg**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**LCSS**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534526**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.20	0.200	1.250	0	96.0	80	120				

Sample ID	**1603284-001ADUP**	SampType:	**DUP**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534528**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.174						0		20	

Sample ID	**1603284-001AMS**	SampType:	**MS**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534533**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.08	0.181	1.129	0.05432	90.5	75	125				

Sample ID	**1603284-001AMSD**	SampType:	**MSD**			Units:	**mg/Kg-dry**	Prep Date:	**3/25/2016**	RunNo:	**28440**
Client ID:	**BATCH**	Batch ID:	**13303**					Analysis Date:	**3/28/2016**	SeqNo:	**534534**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	1.09	0.174	1.088	0.05432	94.7	75	125	1.076	0.879	20	

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID	MB-13307	SampType:	MBLK			Units:	mg/Kg	Prep Date:	3/28/2016		RunNo:	28451
Client ID:	MBLKS	Batch ID:	13307					Analysis Date:	3/28/2016		SeqNo:	534406
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.200									

Sample ID	LCS-13307	SampType:	LCS			Units:	mg/Kg	Prep Date:	3/28/2016		RunNo:	28451
Client ID:	LCSS	Batch ID:	13307					Analysis Date:	3/28/2016		SeqNo:	534407
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.489	0.200	0.5000	0	97.8	80	120				

Sample ID	1603284-001ADUP	SampType:	DUP			Units:	mg/Kg-dry	Prep Date:	3/28/2016		RunNo:	28451
Client ID:	BATCH	Batch ID:	13307					Analysis Date:	3/28/2016		SeqNo:	534409
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.212						0		20	

Sample ID	1603284-001AMS	SampType:	MS			Units:	mg/Kg-dry	Prep Date:	3/28/2016		RunNo:	28451
Client ID:	BATCH	Batch ID:	13307					Analysis Date:	3/28/2016		SeqNo:	534410
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.584	0.224	0.5603	0.03844	97.3	70	130				

Sample ID	1603284-001AMSD	SampType:	MSD			Units:	mg/Kg-dry	Prep Date:	3/28/2016		RunNo:	28451
Client ID:	BATCH	Batch ID:	13307					Analysis Date:	3/28/2016		SeqNo:	534411
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.576	0.216	0.5403	0.03844	99.5	70	130	0.5838	1.36	20	

Date: *3/29/2016*

Work Order: 1603285
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1603284-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/28/2016** RunNo: **28441**
Client ID: **BATCH** Batch ID: **R28441** Analysis Date: **3/28/2016** SeqNo: **534238**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.9	0.500						17.37	13.7	20	

Sample Log-In Check List

Client Name:	**HART**	Work Order Number:	**1603285**
Logged by:	**Clare Griggs**	Date Received:	**3/25/2016 4:32:00 PM**

Chain of Custody

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

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 ☐
		Unknown prior to receipt.		
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐
		Please refer to item information.		
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	12.5
Sample	15.8
Temp Blank	14.4

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

Sample Custody Record

Samples Shipped to: _____

HARTCROWSER 1603785

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 19040-06 LAB NUMBER _____

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad

SAMPLED BY: Andy Wade 425 213 9937

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: 13 Metals	REQUESTED ANALYSIS: pH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	A	S Property Line Soils	3/25/16	11:45	S	X	X	2	0-4' Depth composite
	B	W Property Line Soils	3/25/16	12:20	S	X	X	2	0-4' Depth composite Parking Lot

A = UF-S11 AW ← Please let report Reflect changed Sample ID's

B = UF-S12 AW

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Andy Wade	3/25/16	SIGNATURE: [illegible]	3/25/16
PRINT NAME: ANDY WADE	TIME	PRINT NAME: [illegible]	TIME 16:00
COMPANY: Hart Crowser		COMPANY: FGL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: [illegible]	3/25	SIGNATURE: [illegible]	3/25/16
PRINT NAME: Bill	TIME 16:30	PRINT NAME:	TIME 1632
COMPANY: FGL		COMPANY:	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

COOLER NO.: STORAGE LOCATION: R4

See Lab Work Order No. _____ for Other Contract Requirements

4 TOTAL NUMBER OF CONTAINERS

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

TURNAROUND TIME: /Mike/o
☑ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☐ STANDARD
☐ 72 HOURS OTHER _____

White and Yellow Copies to Lab — Pink to Project Manager — Lab to Return White Copy to Hart Crowser — Gold to Sample Custodian

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

Hart Crowser, Inc.
Anne Conrad
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: Uptown Flats
Lab ID: 1603266

March 30, 2016

Attention Anne Conrad:

Fremont Analytical, Inc. received 5 sample(s) on 3/24/2016 for the analyses presented in the following report.

Hexavalent Chromium by EPA Method 7196
Mercury by EPA Method 7471
pH by EPA Method 9045
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

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
President

Date: *03/30/2016*

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats
Lab Order: 1603266

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1603266-001	UF-E24-S6	03/22/2016 12:40 PM	03/24/2016 2:50 PM
1603266-002	UF-S10-S7	03/24/2016 9:16 AM	03/24/2016 2:50 PM
1603266-003	UF-S8	03/24/2016 12:25 PM	03/24/2016 2:50 PM
1603266-004	UF-S9	03/24/2016 12:38 PM	03/24/2016 2:50 PM
1603266-005	UF-S10	03/24/2016 12:52 PM	03/24/2016 2:50 PM

Revision v3

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1603266**
Date: **3/30/2016**

CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

WO#: **1603266**

Date Reported: **3/30/2016**

Client: Hart Crowser, Inc.
Collection Date: 3/22/2016 12:40:00 PM
Project: Uptown Flats
Lab ID: 1603266-001
Matrix: Soil
Client Sample ID: **UF-E24-S6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13293		Analyst: MW
Mercury	0.0277	0.000983	J MDL	mg/Kg-dry	1	3/24/2016 4:44:50 PM
NOTES: MDL - Sample reported to Method Detection Limit (MDL)						
Total Metals by EPA Method 6020				Batch ID: 13283		Analyst: TN
Antimony	ND	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Arsenic	4.53	0.0904		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Beryllium	0.353	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Cadmium	ND	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Chromium	37.6	0.0904		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Copper	25.1	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Lead	3.67	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Nickel	52.8	0.0904		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Selenium	1.10	0.452		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Silver	ND	0.0904		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Thallium	ND	0.181		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Zinc	46.1	0.362		mg/Kg-dry	1	3/24/2016 4:43:37 PM
Sample Moisture (Percent Moisture)				Batch ID: R28407		Analyst: CG
Percent Moisture	15.5			wt%	1	3/24/2016 3:17:13 PM
pH by EPA Method 9045				Batch ID: R28409		Analyst: SB
Hydrogen Ion (pH)	7.15			pH	1	3/24/2016 3:38:12 PM

Analytical Report

WO#: **1603266**

Date Reported: **3/30/2016**

Client: Hart Crowser, Inc.
Collection Date: 3/24/2016 9:16:00 AM
Project: Uptown Flats
Lab ID: 1603266-002
Matrix: Soil
Client Sample ID: **UF-S10-S7**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13293		Analyst: MW
Mercury	0.00992	0.000970	J MDL	mg/Kg-dry	1	3/24/2016 4:46:29 PM
NOTES: MDL - Sample reported to Method Detection Limit (MDL)						
Total Metals by EPA Method 6020				Batch ID: 13283		Analyst: TN
Antimony	ND	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Arsenic	1.59	0.0835		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Beryllium	ND	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Cadmium	ND	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Chromium	23.6	0.0835		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Copper	11.7	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Lead	1.53	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Nickel	37.0	0.0835		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Selenium	0.641	0.418		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Silver	ND	0.0835		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Thallium	ND	0.167		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Zinc	24.4	0.334		mg/Kg-dry	1	3/24/2016 4:47:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R28407		Analyst: CG
Percent Moisture	9.28			wt%	1	3/24/2016 3:17:13 PM
pH by EPA Method 9045				Batch ID: R28409		Analyst: SB
Hydrogen Ion (pH)	7.95			pH	1	3/24/2016 3:38:12 PM

Analytical Report

WO#: **1603266**

Date Reported: **3/30/2016**

Client: Hart Crowser, Inc.
Collection Date: 3/24/2016 12:25:00 PM
Project: Uptown Flats
Lab ID: 1603266-003
Matrix: Soil
Client Sample ID: UF-S8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13293		Analyst: MW
Mercury	0.00743	0.000948	J MDL	mg/Kg-dry	1	3/24/2016 4:48:05 PM
NOTES: MDL - Sample reported to Method Detection Limit (MDL)						
Total Metals by EPA Method 6020				Batch ID: 13283		Analyst: TN
Antimony	ND	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Arsenic	1.96	0.0816		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Beryllium	ND	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Cadmium	ND	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Chromium	20.9	0.0816		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Copper	9.84	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Lead	1.48	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Nickel	32.1	0.0816		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Selenium	0.567	0.408		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Silver	ND	0.0816		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Thallium	ND	0.163		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Zinc	22.1	0.326		mg/Kg-dry	1	3/24/2016 4:50:42 PM
Sample Moisture (Percent Moisture)				Batch ID: R28407		Analyst: CG
Percent Moisture	12.4			wt%	1	3/24/2016 3:17:13 PM
pH by EPA Method 9045				Batch ID: R28409		Analyst: SB
Hydrogen Ion (pH)	7.85			pH	1	3/24/2016 3:38:12 PM

Analytical Report

WO#: **1603266**

Date Reported: **3/30/2016**

Client: Hart Crowser, Inc.
Collection Date: 3/24/2016 12:38:00 PM
Project: Uptown Flats
Lab ID: 1603266-004
Matrix: Soil
Client Sample ID: UF-S9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13293		Analyst: MW
Mercury	0.00883	0.000801	J MDL	mg/Kg-dry	1	3/24/2016 4:49:41 PM
NOTES: MDL - Sample reported to Method Detection Limit (MDL)						
Total Metals by EPA Method 6020				Batch ID: 13283		Analyst: TN
Antimony	ND	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Arsenic	1.54	0.0809		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Beryllium	ND	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Cadmium	ND	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Chromium	19.7	0.0809		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Copper	8.36	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Lead	1.22	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Nickel	31.3	0.0809		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Selenium	0.721	0.405		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Silver	ND	0.0809		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Thallium	ND	0.162		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Zinc	20.0	0.324		mg/Kg-dry	1	3/24/2016 4:54:14 PM
Sample Moisture (Percent Moisture)				Batch ID: R28407		Analyst: CG
Percent Moisture	8.46			wt%	1	3/24/2016 3:17:13 PM
pH by EPA Method 9045				Batch ID: R28409		Analyst: SB
Hydrogen Ion (pH)	7.95			pH	1	3/24/2016 3:38:12 PM

Analytical Report

WO#: **1603266**

Date Reported: **3/30/2016**

Client: Hart Crowser, Inc.
Collection Date: 3/24/2016 12:52:00 PM
Project: Uptown Flats
Lab ID: 1603266-005
Matrix: Soil
Client Sample ID: UF-S10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Mercury by EPA Method 7471				Batch ID: 13293		Analyst: MW
Mercury	0.0524	0.00103	J MDL	mg/Kg-dry	1	3/24/2016 4:51:18 PM
NOTES: MDL - Sample reported to Method Detection Limit (MDL)						
Total Metals by EPA Method 6020				Batch ID: 13283		Analyst: TN
Antimony	ND	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Arsenic	4.22	0.0998		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Beryllium	0.511	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Cadmium	0.203	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Chromium	69.1	0.0998		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Copper	46.3	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Lead	6.54	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Nickel	87.4	0.0998		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Selenium	1.96	0.499		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Silver	ND	0.0998		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Thallium	ND	0.200		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Zinc	83.7	0.399		mg/Kg-dry	1	3/24/2016 4:57:46 PM
Sample Moisture (Percent Moisture)				Batch ID: R28436		Analyst: SB
Percent Moisture	23.5			wt%	1	3/25/2016 5:03:12 PM
Hexavalent Chromium by EPA Method 7196				Batch ID: 13328		Analyst: MW
Chromium, Hexavalent	ND	0.649		mg/Kg-dry	1	3/30/2016 10:32:00 AM
pH by EPA Method 9045				Batch ID: R28430		Analyst: SB
Hydrogen Ion (pH)	8.69			pH	1	3/25/2016 2:58:07 PM

Revision v3

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Hexavalent Chromium by EPA Method 7196

Sample ID: **MB-13328**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **3/29/2016**			RunNo: **28497**	
Client ID: **MBLKS**	Batch ID: **13328**					Analysis Date: **3/30/2016**			SeqNo: **535243**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-13328**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **3/29/2016**			RunNo: **28497**	
Client ID: **LCSS**	Batch ID: **13328**					Analysis Date: **3/30/2016**			SeqNo: **535244**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	2.47	0.500	2.500	0	98.8	65	135				

Sample ID: **1603266-005ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **3/29/2016**			RunNo: **28497**	
Client ID: **UF-S10**	Batch ID: **13328**					Analysis Date: **3/30/2016**			SeqNo: **535250**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.649						0		30	

Sample ID: **1603266-005AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **3/29/2016**			RunNo: **28497**	
Client ID: **UF-S10**	Batch ID: **13328**					Analysis Date: **3/30/2016**			SeqNo: **535251**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	2.60	0.650	3.249	0.09988	77.0	65	135				

Sample ID: **1603266-005AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **3/29/2016**			RunNo: **28497**	
Client ID: **UF-S10**	Batch ID: **13328**					Analysis Date: **3/30/2016**			SeqNo: **535252**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	2.72	0.654	3.269	0.09988	80.1	65	135	2.601	4.47	30	

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID: **MB-R28409**	SampType: **MBLK**			Units: **pH**		Prep Date: **3/24/2016**		RunNo: **28409**		
Client ID: **MBLKS**	Batch ID: **R28409**					Analysis Date: **3/24/2016**		SeqNo: **533621**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	8.98										

Sample ID: **LCS-R28409**	SampType: **LCS**			Units: **pH**		Prep Date: **3/24/2016**		RunNo: **28409**		
Client ID: **LCSS**	Batch ID: **R28409**					Analysis Date: **3/24/2016**		SeqNo: **533622**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.09		7.000	0	101	95	105				

Sample ID: **1603266-001ADUP**	SampType: **DUP**			Units: **pH**		Prep Date: **3/24/2016**		RunNo: **28409**		
Client ID: **UF-E24-S6**	Batch ID: **R28409**					Analysis Date: **3/24/2016**		SeqNo: **533624**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.17							7.150	0.279	10	

Sample ID: **MB-R28430**	SampType: **MBLK**			Units: **pH**		Prep Date: **3/25/2016**		RunNo: **28430**		
Client ID: **MBLKS**	Batch ID: **R28430**					Analysis Date: **3/25/2016**		SeqNo: **533989**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	8.54										

Sample ID: **LCS-R28430**	SampType: **LCS**			Units: **pH**		Prep Date: **3/25/2016**		RunNo: **28430**		
Client ID: **LCSS**	Batch ID: **R28430**					Analysis Date: **3/25/2016**		SeqNo: **533990**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.10		7.000	0	101	95	105				

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID: **1603266-005ADUP** SampType: **DUP** Units: **pH** Prep Date: **3/25/2016** RunNo: **28430**
Client ID: **UF-S10** Batch ID: **R28430** Analysis Date: **3/25/2016** SeqNo: **533992**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	8.75							8.690	0.688	10	

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **MB-13283** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **MBLKS** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533557**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.200									
Arsenic	ND	0.100									
Beryllium	ND	0.200									
Cadmium	ND	0.200									
Chromium	ND	0.100									
Copper	ND	0.200									
Lead	ND	0.200									
Nickel	ND	0.100									
Selenium	ND	0.500									
Silver	ND	0.100									
Thallium	ND	0.200									
Zinc	ND	0.400									

Sample ID: **LCS-13283** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **LCSS** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533558**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.01	0.200	2.500	0	80.2	80	120				
Arsenic	43.4	0.100	50.00	0	86.8	80	120				
Beryllium	2.37	0.200	2.500	0	94.8	80	120				
Cadmium	2.33	0.200	2.500	0	93.0	80	120				
Chromium	44.1	0.100	50.00	0	88.2	80	120				
Copper	46.0	0.200	50.00	0	92.1	80	120				
Lead	21.5	0.200	25.00	0	85.8	80	120				
Nickel	45.3	0.100	50.00	0	90.5	80	120				
Selenium	4.11	0.500	5.000	0	82.2	80	120				
Silver	2.23	0.100	2.500	0	89.3	80	120				
Thallium	1.06	0.200	1.250	0	84.9	80	120				
Zinc	42.8	0.400	50.00	0	85.7	80	120				

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **1603207-004ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **BATCH** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533560**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.175						0		20	
Arsenic	2.31	0.0874						1.979	15.3	20	
Beryllium	0.456	0.175						0.4170	8.97	20	
Cadmium	ND	0.175						0		20	
Chromium	44.6	0.0874						41.09	8.29	20	
Copper	20.4	0.175						19.17	6.36	20	
Lead	7.47	0.175						6.620	12.1	20	
Nickel	37.1	0.0874						33.30	10.7	20	
Selenium	1.07	0.437						1.005	6.58	20	
Silver	ND	0.0874						0		20	
Thallium	ND	0.175						0		20	
Zinc	44.6	0.350						40.41	9.88	20	

Sample ID: **1603207-004AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **BATCH** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533564**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.766	0.173	2.169	0.08336	31.5	75	125				S
Arsenic	45.3	0.0867	43.37	1.979	99.8	75	125				
Beryllium	3.54	0.173	2.169	0.4170	144	75	125				S
Cadmium	2.23	0.173	2.169	0.05448	100	75	125				
Chromium	93.9	0.0867	43.37	41.09	122	75	125				
Copper	64.0	0.173	43.37	19.17	103	75	125				
Lead	27.6	0.173	21.69	6.620	96.8	75	125				
Nickel	82.8	0.0867	43.37	33.30	114	75	125				
Selenium	4.75	0.434	4.337	1.005	86.3	75	125				
Silver	1.62	0.0867	2.169	0.05721	72.1	75	125				S
Thallium	1.16	0.173	1.084	0.1258	95.5	75	125				
Zinc	86.5	0.347	43.37	40.41	106	75	125				

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **1603207-004AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **BATCH** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533564**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1603207-004AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **BATCH** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533565**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.722	0.175	2.185	0.08336	29.2	75	125	0.7657	5.91	20	S
Arsenic	45.3	0.0874	43.70	1.979	99.1	75	125	45.28	0.0481	20	
Beryllium	3.63	0.175	2.185	0.4170	147	75	125	3.536	2.74	20	S
Cadmium	2.26	0.175	2.185	0.05448	101	75	125	2.230	1.12	20	
Chromium	88.9	0.0874	43.70	41.09	109	75	125	93.94	5.47	20	
Copper	62.6	0.175	43.70	19.17	99.3	75	125	64.04	2.31	20	
Lead	26.6	0.175	21.85	6.620	91.3	75	125	27.60	3.84	20	
Nickel	79.5	0.0874	43.70	33.30	106	75	125	82.84	4.09	20	
Selenium	4.82	0.437	4.370	1.005	87.2	75	125	4.748	1.41	20	
Silver	1.65	0.0874	2.185	0.05721	72.8	75	125	1.620	1.75	20	S
Thallium	1.13	0.175	1.093	0.1258	91.6	75	125	1.161	3.07	20	
Zinc	85.1	0.350	43.70	40.41	102	75	125	86.52	1.62	20	

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1603207-004APDS** SampType: **PDS** Units: **mg/Kg-dry** Prep Date: **3/23/2016** RunNo: **28401**
Client ID: **BATCH** Batch ID: **13283** Analysis Date: **3/24/2016** SeqNo: **533566**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.91	0.173	2.17	0.0834	84.2	80	120				
Beryllium	3.42	0.173	2.17	0.417	139	80	120				S
Silver	1.69	0.0867	2.17	0.0572	75.4	80	120				S

NOTES:
S - Outlying spike recovery observed.

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID: **MB-13293**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **3/24/2016**		RunNo: **28410**		
Client ID: **MBLKS**	Batch ID: **13293**					Analysis Date: **3/24/2016**		SeqNo: **533647**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200									

Sample ID: **LCS-13293**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **3/24/2016**		RunNo: **28410**		
Client ID: **LCSS**	Batch ID: **13293**					Analysis Date: **3/24/2016**		SeqNo: **533648**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.514	0.200	0.5000	0	103	80	120				

Sample ID: **1603093-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **3/24/2016**		RunNo: **28410**		
Client ID: **BATCH**	Batch ID: **13293**					Analysis Date: **3/24/2016**		SeqNo: **533650**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.201						0		20	

Sample ID: **1603093-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **3/24/2016**		RunNo: **28410**		
Client ID: **BATCH**	Batch ID: **13293**					Analysis Date: **3/24/2016**		SeqNo: **533651**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.568	0.212	0.5305	0.03883	99.7	70	130				

Sample ID: **1603093-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **3/24/2016**		RunNo: **28410**		
Client ID: **BATCH**	Batch ID: **13293**					Analysis Date: **3/24/2016**		SeqNo: **533652**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.537	0.201	0.5030	0.03883	99.1	70	130	0.5676	5.50	20	

Work Order: 1603266
CLIENT: Hart Crowser, Inc.
Project: Uptown Flats

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1603266-003ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/24/2016** RunNo: **28407**
Client ID: **UF-S8** Batch ID: **R28407** Analysis Date: **3/24/2016** SeqNo: **533614**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	11.8	0.500						12.43	4.95	20	

Sample ID: **1603266-005ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/25/2016** RunNo: **28436**
Client ID: **UF-S10** Batch ID: **R28436** Analysis Date: **3/25/2016** SeqNo: **534063**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	23.2	0.500						23.52	1.42	20	

Sample Log-In Check List

Client Name:	**HART**	Work Order Number:	**1603266**
Logged by:	**Erica Silva**	Date Received:	**3/24/2016 2:50:00 PM**

Chain of Custody

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

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 ☐
		Unknown prior to receipt		
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐
		Please refer to Item Information		
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:	Anne Conrad	Date:	3/24/2016
By Whom:	Mike Ridgeway	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Metals and TAT		
Client Instructions:	Priority Pollutant Metals, 24hr TAT		

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	14.1
Sample	15.3

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

Sample Custody Record

Samples Shipped to: _____

1603266

HART CROWSER
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 19040-06 LAB NUMBER Fremont
PROJECT NAME Uptown Flats
HART CROWSER CONTACT Anne Conrad / Jamalyn Green
SAMPLED BY: Andy Wade

LAB NO.	SAMPLE ID	~~DESCRIPTION~~	DATE	TIME	MATRIX	REQUESTED ANALYSIS: Metals (13)	REQUESTED ANALYSIS: pH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-E24-S6		3/22/16	1240	SOIL	X	X	1	elevation 92-88 composite
	UF-S10-S7		3/24/16	0916	SOIL	X	X	1	elevation 82-78 composite
	UF-S8			1225	SOIL	X	X	1	0-4' depth, 35'E of W13
	UF-S9			1238	SOIL	X	X	1	4-8' depth, 25'E of W16
	UF-S10			1252	SOIL			1	Hold
									8-12' depth, 30' W of E8

Jamalyn Green 3/24/16

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Jamalyn Green	3/24/16	Bill K.	3/24/16
SIGNATURE Jamalyn Green	TIME	SIGNATURE Bill K.	TIME
PRINT NAME HC	1415	PRINT NAME	14:15
COMPANY		COMPANY FAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
Bill K	3/24/16	Samantha Beeman	03/24/16
SIGNATURE Bill K	TIME	SIGNATURE Samantha Beeman	TIME
PRINT NAME FAL	14:50	PRINT NAME FAL	14:50
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
24 hr. turnaround time

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

TOTAL NUMBER OF CONTAINERS

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

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

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample Custody Record

Samples Shipped to: _____

1603266a

HARTCROWSER

Hart Crowser, Inc
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 19040-06 LAB NUMBER Fremont

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad / Jamalyn Green

SAMPLED BY: Andy Wade

LAB NO.	SAMPLE ID	~~DESCRIPTION~~	DATE	TIME	MATRIX	Metals (13)	PH	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-E24-S6		3/22/16	1240	SOIL	X	X	1	elevation 92-88 composite
	UF-S10-S7		3/24/16	0916	SOIL	X	X	1	elevation 82-78 composite
	UF-S8			1225	SOIL	X	X	1	0-4' depth, 35'E of WB
	UF-S9			1238	SOIL	X	X	1	4-8' depth, 25'E of WB
	UF-S10			1252	SOIL	⊗	⊗	1	~~Hold~~ cw 3/25/16 9-12' depth, 30' W of E8 ⊗ Add Analysis per client request, RUSH TAT cw 3/25/16

Jamalyn Green 3/24/16

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Jamalyn Green	3/24/16	SIGNATURE	3/24/16
PRINT NAME	TIME 1415	PRINT NAME	TIME 1415
COMPANY HC		COMPANY FAL	
RELINQUISHED BY	DATE 3/24/16	RECEIVED BY	DATE
SIGNATURE	TIME 1450	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY FAL		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
24 hr turnaround time

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

TOTAL NUMBER OF CONTAINERS

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

TURNAROUND TIME
☒24 HOURS ☐1 WEEK
☐48 HOURS ☐STANDARD
☐72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample Custody Record

Samples Shipped to: _____

1603266a

HARTCROWSER

Hart Crowser, Inc
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 19040-06 LAB NUMBER Fremont

PROJECT NAME Uptown Flats

HART CROWSER CONTACT Anne Conrad / Jamalyn Green

SAMPLED BY: Andy Wade

LAB NO.	SAMPLE ID	~~DESCRIPTION~~	DATE	TIME	MATRIX	Metals (13)	pH	Hex Cr	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	UF-E24-S6		3/22/16	1240	SOIL	X	X		1	Elevation 92-88 composite
	UF-S10-S7		3/24/16	0916	SOIL	X	X		1	Elevation 82-78 composite
	UF-S8			1225	SOIL	X	X		1	0-4' depth, 35'E of WB
	UF-S9			1238	SOIL	X	X		1	4-8' depth, 25'E of WB
	UF-S10			1252	SOIL	⊗	⊗	⊗	1	~~Hold~~ cw 3/25/16
										8-12' depth, 30' W of E8
										⊗ Add Analysis per client request, RUSH TAT cw 3/25/16
										⊗ Added per A.C. RUSH cog 3/29/16

Jamalyn Green 3/24/16

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Jamalyn Green	3/24/16	SIGNATURE	3/24/16
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY HC	1415	COMPANY FAL	1415
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	3/24/16	SIGNATURE	3/24/16
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY FAL	1450	COMPANY FAL	1450

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
24 hr turnaround time

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

TOTAL NUMBER OF CONTAINERS

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

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

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Fremont Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **3/24/2016 9:46:00 A**
Prep End Date: **3/24/2016 4:15:00 P**

Prep Batch ID: **13283** Prep Code: **PREP-3050** Method No: **SW3050** Technician: **Samantha Beerma**

Prep Factor Units: **mL / g**

Initial Temp: **95 ℃** Final Temp **94 ℃**

Sample ID	ClientSampleID	Matrix	pH1	pH2	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-13283		Soil			1	0	0	500	500.000	3/23/2016	3/24/2016
LCS-13283		Soil			1	0	0	500	500.000	3/23/2016	3/24/2016
1603207-004A	PS-031616-04	Soil			1.33	0	0	500	375.940	3/23/2016	3/24/2016
1603207-004ADUP		Soil			1.32	0	0	500	378.788	3/23/2016	3/24/2016
1603207-004ADIL		Soil			1.33	0	0	2500	1879.699	3/23/2016	3/24/2016
1603207-004AMS		Soil			1.33	0	0	500	375.940	3/23/2016	3/24/2016
1603207-004AMSD		Soil			1.32	0	0	500	378.788	3/23/2016	3/24/2016
1603207-004APDS		Soil			1.33	0	0	500	375.940	3/23/2016	3/24/2016
1603207-005A	PS-031616-05	Soil			1.27	0	0	500	393.701	3/23/2016	3/24/2016
1603207-006A	PS-031616-06	Soil			1.31	0	0	500	381.679	3/23/2016	3/24/2016
1603217-001A	M-Pb-01	olid Materials - Bu			0.0717	0	0	500	6973.501	3/23/2016	3/24/2016
1603217-002A	M-Pb-02	olid Materials - Bu			0.1226	0	0	500	4078.303	3/23/2016	3/24/2016
1603218-001A	MI-Pb-01	olid Materials - Bu			0.49	0	0	500	1020.408	3/23/2016	3/24/2016
1603218-002A	MI-Pb-02	olid Materials - Bu			0.33	0	0	500	1515.152	3/23/2016	3/24/2016
1603218-003A	MI-Pb-03	olid Materials - Bu			0.48	0	0	500	1041.667	3/23/2016	3/24/2016
1603219-001A	BP-1	Soil			2.41	0	0	500	207.469	3/23/2016	3/24/2016
1603266-001A	UF-E24-S6	Soil			1.31	0	0	500	381.679	3/24/2016	3/24/2016
1603266-002A	UF-S10-S7	Soil			1.32	0	0	500	378.788	3/24/2016	3/24/2016
1603266-003A	UF-S8	Soil			1.4	0	0	500	357.143	3/24/2016	3/24/2016
1603266-004A	UF-S9	Soil			1.35	0	0	500	370.370	3/24/2016	3/24/2016
1603266-005A	UF-S10	Soil			1.31	0	0	500	381.679	3/24/2016	3/24/2016

Type	Chemical / Reagent ID	Chemical / Reagent Name	Container#	Container ID	Amount Added	Amount Unit
Reagent	1098	1:1 HCL 03/07/2016	1227	#Error	2.5	mL
Chemical	864	Nitric Acid	2333	#Error	3.5	mL

Fremont Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **3/24/2016 9:46:00 A**
Prep End Date: **3/24/2016 4:15:00 P**

Prep Batch ID: **13283** Prep Code: **PREP-3050** Method No: **SW3050** Technician: **Samantha Beerma**

Prep Factor Units: **mL / g**

Initial Temp: **95 ℃** Final Temp **94 ℃**

Spike ID	Spike Name	Samp Type	Container#	Container ID	Amount Added	Amount Unit
M-ICP-2MS-WATER 02/22/16	Metals Water Spike 5mg/L	PDS	17965	Container-01 of 01	0.2	mL
M-ICP-EAL-STD-1D 11.24.15	EAL-STD-1D	LCS	17720	Container-01 of 01	0.5	mL
M-ICP-EAL-STD-1D 11.24.15	EAL-STD-1D	MS	17720	Container-01 of 01	0.5	mL
M-ICP-EAL-STD-1D 11.24.15	EAL-STD-1D	MSD	17720	Container-01 of 01	0.5	mL
M-ICP-EAL-STD-3 11.24.15	EAL-STD-3	LCS	17719	Container-01 of 01	0.5	mL
M-ICP-EAL-STD-3 11.24.15	EAL-STD-3	MS	17719	Container-01 of 01	0.5	mL
M-ICP-EAL-STD-3 11.24.15	EAL-STD-3	MSD	17719	Container-01 of 01	0.5	mL

Equipment ID	Description
Balance-1	1118323397
Balance-3	1123460917
HOT BLOCK 3	CPI hot block with 48 spaces
Pipette 16	1-5 mL
Pipette 21	100.0µl - 1000.0µl
Pipette 22	100.0µl - 1000.0µl
Pipette 4	Eppendorf 100 uL Pipette
Pipette 7	Gilson 200 uL Pipette

APPENDIX B
UST Decommissioning Documents

INTERNATIONAL CODE COUNCIL

UST Decommissioning

Candidate ID: ICC00035560

Name: SCOT OVERDICK Date: 10/3/2014

Address: 4200 175th St SW

Lynnwood WA 98037

EXAMINATION RESULT: **PASS**

Congratulations! You have passed the above named examination. Your wallet card will be forwarded to you by ICC within six weeks from the last day of the month in which you tested. This certificate is current for two years.

You may request a wall certificate from ICC as well. This certificate will be provided at no cost to you, if you request it within 90 days of your exam. Only one wall certificate per exam passed will be provided to you at no charge. For more information on requesting a wall certificate, go to www.iccsafe.org/inspector.

It is extremely important that you notify Pearson VUE and ICC of any changes in name and/or address to avoid the possibility of your wallet card and/or certificate not being received. Please contact Pearson VUE at 800-275-8301 and ICC at certexam@iccsafe.org with changes to your name and address (name changes may require additional documentation). There may be an additional fee if a certification is re-issued due to a misspelled name or incorrect address.

The authenticity of this score report can be validated by using Pearson VUE's Online Score Report Authentication found at:
www.PearsonVUE.com/authenticate
Digital embossing eliminates the possibility of unauthorized embossing of counterfeit score reports.

Registration Number: ***273518003*** *Validation Number:* ***777427077***

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 1-300 Gals UST TANK

Last Contents _____

Tank Location: 301 1ST AVE W.
Seattle, WA

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: Compass (Fleet Growzer)

Contractor: IO ENVIRO

M.V.S. Representative: _____

Date: 3 17 16

Notes:

This Shipping Order

must be legibly filled in, in Ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 024388

Carrier No.

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

Date 3 17 16

Page _____ of _____

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC
Street 1516 S. GRAHAM ST
City SEATTLE State WA Zip Code 98108

FROM:
Shipper IO ENVIRO
Street 301 1ST AVE W
City Seattle State WA Zip Code
24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
		NON REGULATED BY DOT				
TT		WASTE WATER	300	Gals		

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER
PER
3 17 16

CARRIER MARINE VACUUM SERVICE, INC.
PER
DATE 3 17 16

2

Permanent post-office address of shipper.

This Shipping Order

must be legibly filled in, in ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 024409

Carrier No. _____

Page _____ of _____

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

Date 3 17 16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC

Street 1516 S. GRAHAM ST

City SEATTLE State WA Zip Code 98108

FROM:
Shipper IO ENVIRO

Street 301 1ST AVE W

City Seattle State WA Zip Code

24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
TL		P-UP MST TANK 1-300 Gallon TANK				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

PER [signature]

3 17 16

CARRIER MARINE VACUUM SERVICE, INC.

PER [signature]

DATE 3 17 16

2

Permanent post-office address of shipper.

Your Seattle Fire Department

APPLICATION FOR TEMPORARY PERMIT

Code 7908 **Commercial Tank Removal/Decommissioning**

Permit Fee: $218.00 **Date Issued:** 3/17/16

Tank(s) must be removed from site on the same day as permit is issued!

TO BE COMPLETED BY PERMIT APPLICANT

FIRM NAME	IO Environmental + Infrastructure		
MAILING ADDRESS	14734 NE 95th	SUITE	
CITY	Redmond	STATE WA	ZIP 98052
JOBSITE ADDRESS	301 1st Ave W. Seattle		
CONTACT PERSON	Scot Overdick	PHONE NUMBER	(425) 417-5344

Number of Tank(s): 1 Tank Size(s): 300 gallon ☐ Aboveground tank

Product(s) Previously Contained: Heating oil ☒ Underground tank

☒ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns)

Hot work being conducted: ☒ No ☐ Yes (If yes, a separate hot work permit is required)

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

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

To pay with a Visa or Master Card: Fax or email this application
THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT
Tel: (206) 386-1450 / Fax: (206) 386-1348
E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

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

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

FMO USE:	**APPROVED BY:**	
Check No.:	Inspector:	SFD ID#
Receipt No.:	Name of Marine Chemist	Certificate #
Application ID#:	Date:	

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS

1. Two (2) portable fire extinguishers each having a minimum rating of 40 BC shall be on site within 50 feet of the operation. Fire extinguishers shall be inspected, approved and certified annually.

2. Rope or ribbon barricades located at least 10 feet from the tank shall surround every outdoor storage tank removal or decommissioning operation or the operation shall be enclosed in a fenced yard.

3. "No Smoking" signs shall be posted in readily visible locations.

4. No hot work is allowed on a tank system prior to issuance of this permit and the tank is certified "Safe for Hot Work" by a Certified Marine Chemist. Hot work means any activities involving riveting, welding, burning, brazing, soldering, heating, chopping, grinding, ripping, drilling, cutting with a chop saw or "Sawzall", abrasive blasting, use of powder-actuated tools or similar spark-producing operations, crushing or mechanically shearing to facilitate opening for cleaning, disposal, scrapping for recycling purposes.

5. A separate temporary Seattle Fire Department permit (Code 4913) or a validation number assigned in conjunction with an annual hot work permit (Code 4911 or 4912) is required prior to any hot work operations.

6. Permits may cover multiple tanks located at the same address. If additional tanks are to be removed or abandoned at later dates, separate permits shall be obtained. Each address location requires a separate permit application regardless of whether multiple address locations are physically next to one another.

7. Additional fees will be charged if inspectors are required to work other than normal business hours. (Normal business hours are Monday through Friday, 8:00 a.m. to 4:30 p.m.)

8. No excavation of an underground tank is permitted prior to inspection by the Seattle Fire Marshal's Office.
   Exception: Removal of the top layer of asphalt or concrete only with no removal of dirt, pea gravel or soil over the underground storage tank. Further excavation may be allowed by a Seattle Fire Department Special Hazards Unit Inspector prior to the initial inspection depending on conditions and if the tank has been inerted by a Marine Chemist who is present on site. The name of the inspector and the time permission was given shall be made available at time of inspection.

9. Prior to inspection, to ensure tanks and connected piping are completely free of all flammable or combustible liquids, a receipt or certificate must be on site indicating the tanks have been pumped and rinsed by an approved company. Product and rinse water must be disposed of in an approved manner.

10. For tanks being decommissioned in place that previously contained Class I liquids, a Certified Marine Chemist certificate must be issued and available on site for inspection certifying that the tank has been properly inerted prior to filling.

11. No tank shall be filled prior to an inspection by the Seattle Fire Marshal's Office.

12. Tanks being decommissioned in place must be filled with a lean concrete mixture. Filling with foam is prohibited.

13. A Marine Chemist's certificate verifying the tank has been properly inerted or is otherwise certified "Safe for Hot Work" shall be issued and available on site for inspection for each underground and aboveground tank being removed regardless of the product previously contained.

14. If tanks are being removed, the tanks' atmosphere must be inert using one of the following approved methods:
    - Dry ice (pellets or chunks of solid CO_2). Minimum 40 lbs per 1000 gallons of tank capacity is recommended.
    - Compressed CO_2 gas in cylinders (Note: This method may only be performed by a Certified Marine Chemist).
    - Purging with air (gas-freeing) using Venturi tube apparatus, with proper bonding and grounding and after the tank has been pumped and rinsed by an approved company.

15. A maximum reading of less than 6% of oxygen must be obtained prior to the removal of the tanks if CO_2 or another inert gas, as approved by the Marine Chemist, is used to inert the tank or, a reading of 0% LEL must be obtained prior to removal of the tank if the air-purging (Venturi air moving devices) method is used.

16. All local, state and federal regulations for confined space entry shall be complied with prior to entering an underground storage tank.

17. Tanks with baffles to prevent movement of liquid must be certified gas-freed or inerted by a Certified Marine Chemist or a Petroleum Industry Safety Engineer regularly engaged in that business prior to removal.

18. Tanks being removed must be removed from the site and relocated to a remote, approved facility on the same day that the permit is issued.

19. During the hot work operations, digging, excavating, hauling or transport of petroleum storage tanks that have not been cleaned and gas-freed, tanks must be inerted to less than 6% oxygen. All openings are to be cap closed and secured except for one 1/8" hole drilled through a cap. These tanks are to be sprayed painted with "INERTED, DO NOT ENTER" or "INERTED WITH CO_2, NOT SAFE FOR WORKERS".

George D Blair - Northwest Marine Chemist, Inc.
P. O. Box 7084, Tacoma, WA 98406
Office: 253-752-0149 Fax: 253-759-3523
Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE

Serial 637-00528

I O Environmental	Elan Uptown Flats	Mar 17, 2016
Survey Requested by	Vessel Owner Agent	Date
Tank Farm	Underground Storage Tank	301 1st Ave. W.
Vessel	Type of Vessel	Specific Location of Vessel
Heating Oil	O_2, LEL, Visual, VOC	9:38
Last Three 3 Loadings	Tests Performed	Time Survey Completed

Inspected Spaces:
Group 1. 300 gal. UST

Safety Designations:
ATMOSPHERE SAFE FOR WORKERS
SAFE FOR LIMITED HOT WORK
LIMITATIONS:
Specific Location: *At job site.*
Hot Work Type: *This tank has been pressure washed in excess of EPA triple rinse requirement, and is free of running liquid residue, flammable vapors and liquids, and is safe for excavation, transportation, and disposal.*

Test Results	% O_2	% LEL	VOC
Inspected spaces group 1	20.8%	0%	.7 ppm

He
HAS

Limits of Detection
0.1 ppm VOC

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or recommencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate.

STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFP 306, Subsections 4.3.1 through 4.3.6)

ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere shall be at least 19.5 percent and not greater than 22 percent by volume; (b) the concentration of flammable materials is below 10 percent of the lower explosive limit; (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or fumigants are within permissible concentrations at the time of the inspection.

NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified.

SAFE FOR HOT WORK: In the compartment or space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit; (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not be capable of producing a higher concentration than permitted by (a) or (b); (d) all adjacent spaces, containing or having contained flammable or combustible materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire; or they are inerted. Ship's fuel tanks, lube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's requirements.

SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations; (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot is not permitted.

CHEMISTS ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Jm Dec

GDBL

	Mar 17, 2016	I O Environmental	637

1st w/ w thomas Thurs 3/17/16 @ 11am

Your
Seattle
Fire Department

RECEIVED
MAR 15 2016
PERMIT SECTION

Dont need

APPLICATION FOR TEMPORARY PERMIT

Code 7908 **Commercial Tank Removal/Decommissioning**

Permit Fee: $218.00

Date Issued: 3/17/16

Tank(s) must be removed from site on the same day as permit is issued!

TO BE COMPLETED BY PERMIT APPLICANT

FIRM NAME IO Environmental + Infrastructure

MAILING ADDRESS 14734 NE 95th SUITE

CITY Redmond STATE WA ZIP 98052

JOBSITE ADDRESS 301 1st Ave W. Seattle

CONTACT PERSON Scot Overdick PHONE NUMBER (425) 417-5344

Number of Tank(s): 1 Tank Size(s): 300 gallon ☐ Aboveground tank

Product(s) Previously Contained: Heating oil ☒ Underground tank

☒ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns)

Hot work being conducted: ☒ No ☐ Yes (If yes, a separate hot work permit is required)

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

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

To pay with a Visa or Master Card: Fax or email this application
THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT
Tel: (206) 386-1450 / Fax: (206) 386-1348
E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

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

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

FMO USE:
Check No.: 00006469031516
Receipt No.: 5-258431
Application ID#: 104340

APPROVED BY:
Inspector: RL Devitt SFD ID# 1321
Name of Marine Chemist George Certificate # 637
Date: 3/17/16

APPENDIX C
Boring Logs

Key to Exploration Logs

Sample Description

Classification 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. Visual-manual classification methods of ASTM D 2488 were used as an identification guide.

Soil descriptions consist of the following:
Density/consistency, moisture, color, minor constituents, MAJOR CONSTITUENT, additional remarks.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance. Soil density/consistency in test pits and probes is estimated based on visual observation and is presented parenthetically on the logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot	Approximate Shear Strength in TSF
Very loose	0 to 4	Very soft	0 to 2	<0.125
Loose	4 to 10	Soft	2 to 4	0.125 to 0.25
Medium dense	10 to 30	Medium stiff	4 to 8	0.25 to 0.5
Dense	30 to 50	Stiff	8 to 15	0.5 to 1.0
Very dense	>50	Very stiff	15 to 30	1.0 to 2.0
		Hard	>30	>2.0

Sampling Test Symbols

- 1.5" I.D. Split Spoon
- Grab (Jar)
- 3.0" I.D. Split Spoon
- Shelby Tube (Pushed)
- Bag
- Cuttings
- Core Run

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Moisture

Dry	Little perceptible moisture
Damp	Some perceptible moisture, likely below optimum
Moist	Likely near optimum moisture content
Wet	Much perceptible moisture, likely above optimum

Minor Constituents	Estimated Percentage
Trace	<5
Slightly (clayey, silty, etc.)	5 - 12
Clayey, silty, sandy, gravelly	12 - 30
Very (clayey, silty, etc.)	30 - 50

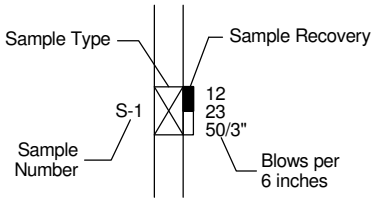
Laboratory Test Symbols

GS	Grain Size Classification
CN	Consolidation
UU	Unconsolidated Undrained Triaxial
CU	Consolidated Undrained Triaxial
CD	Consolidated Drained Triaxial
QU	Unconfined Compression
DS	Direct Shear
K	Permeability
PP	Pocket Penetrometer Approximate Compressive Strength in TSF
TV	Torvane Approximate Shear Strength in TSF
CBR	California Bearing Ratio
MD	Moisture Density Relationship
AL	Atterberg Limits
	Water Content in Percent Liquid Limit Natural Plastic Limit
PID	Photoionization Detector Reading
CA	Chemical Analysis
DT	In Situ Density in PCF
OT	Tests by Others

Groundwater Indicators

- Groundwater Level on Date or (ATD) At Time of Drilling
- Groundwater Seepage (Test Pits)

Sample Key



HARTCROWSER

19040-03 *12/14*

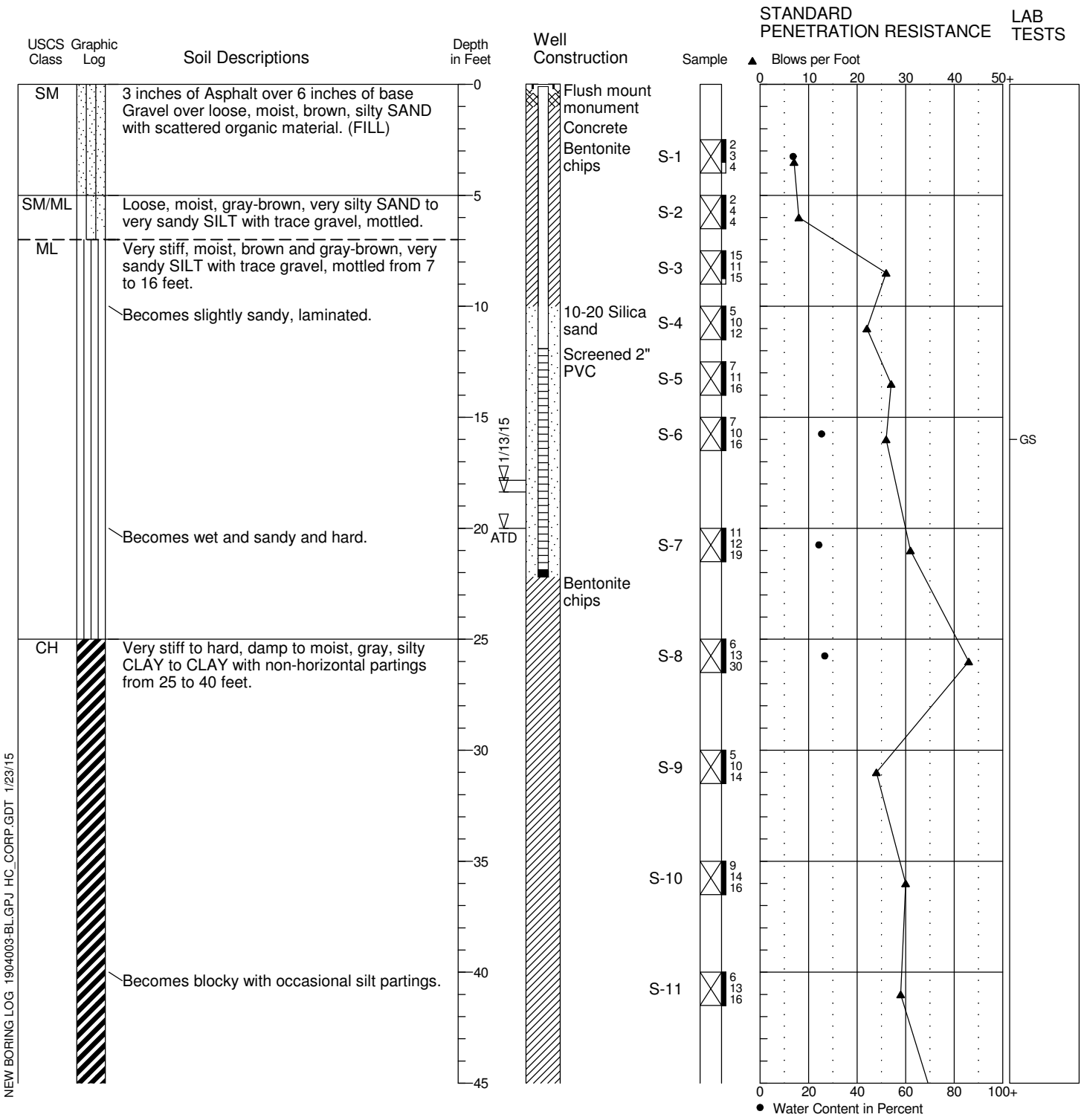
Figure A-1

KEY SHEET 1904003-BL.GPJ HC_CORP.GDT 12/23/14

Boring Log HC-102

Location:
Approximate Ground Surface Elevation: 105 Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
5. Water Level: 12/15/14 = 18.36 feet

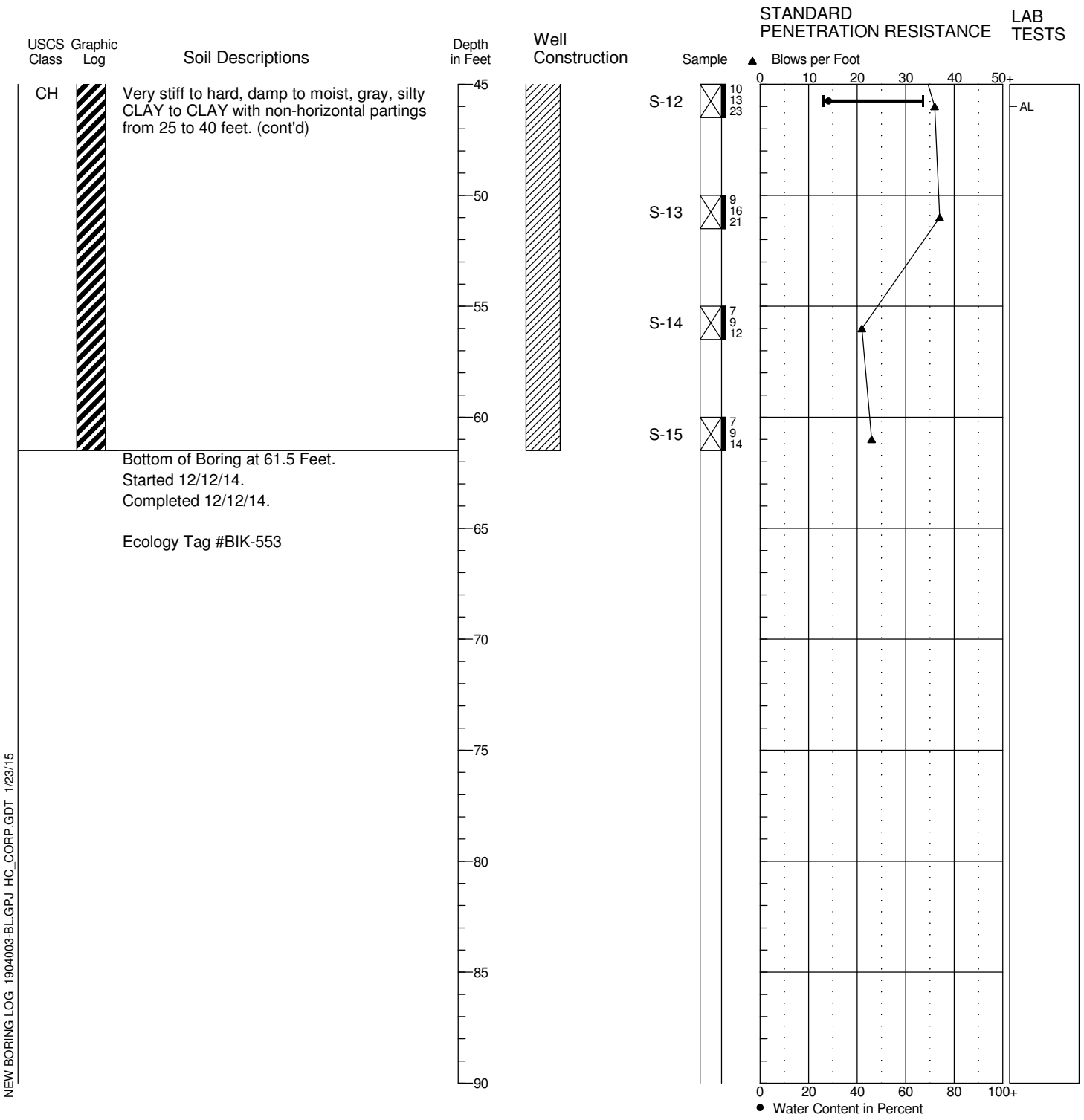
HARTCROWSER

19040-03 ***12/14***
Figure A-2 ***1/2***

Boring Log HC-102

Location:
Approximate Ground Surface Elevation: 105 Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez



NEW BORING LOG 1904003-BL.GPJ HC_CORP.GDT 1/23/15

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3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
5. Water Level: 12/15/14 = 18.36 feet

HARTCROWSER

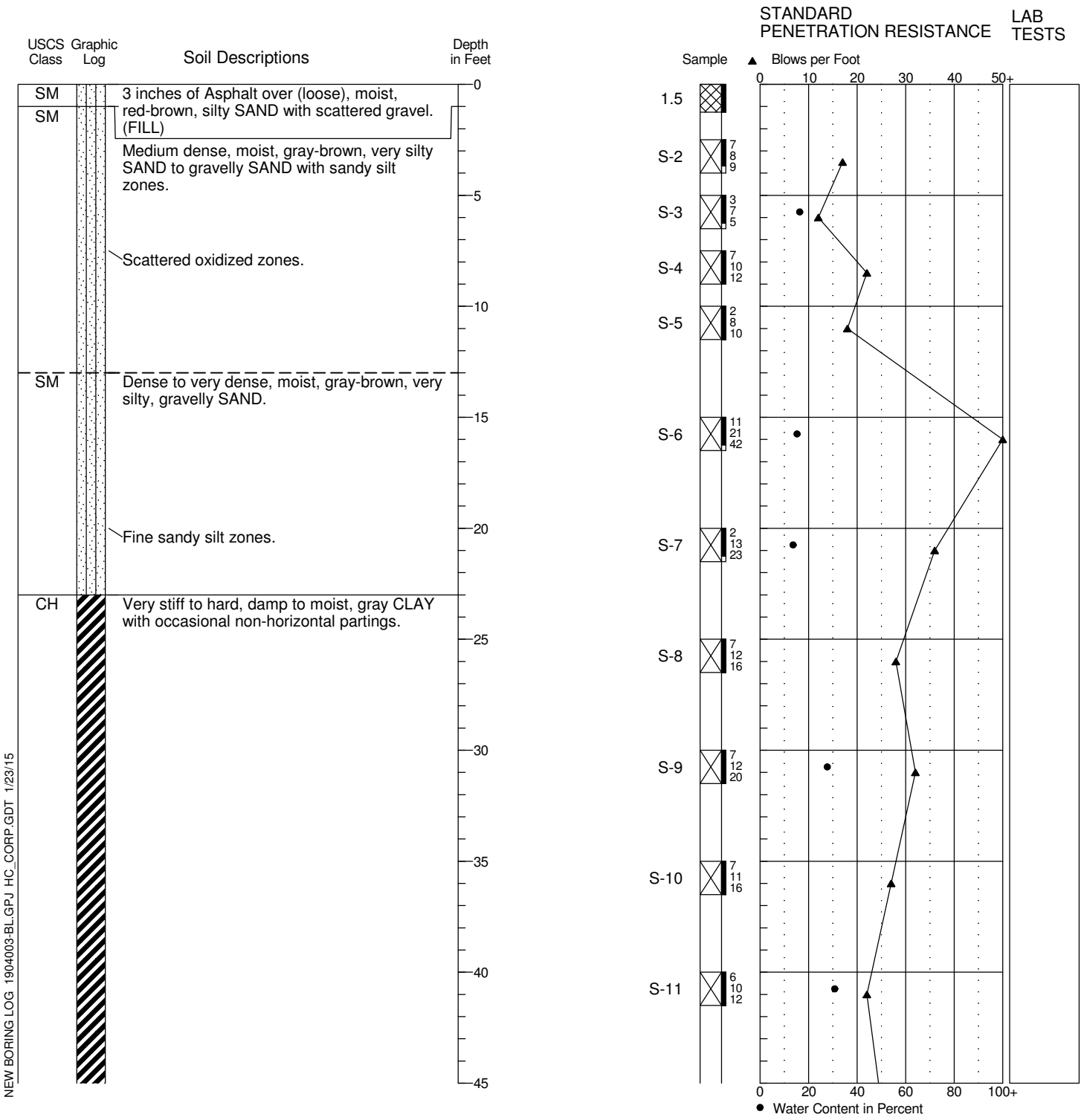
19040-03 ***12/14***

Figure A-2 ***2/2***

Boring Log HC-103

Location:
Approximate Ground Surface Elevation: 100 Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez



NEW BORING LOG 1904003-BL.GPJ HC_CORP.GDT 1/23/15

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HARTCROWSER

19040-03 ***12/14***

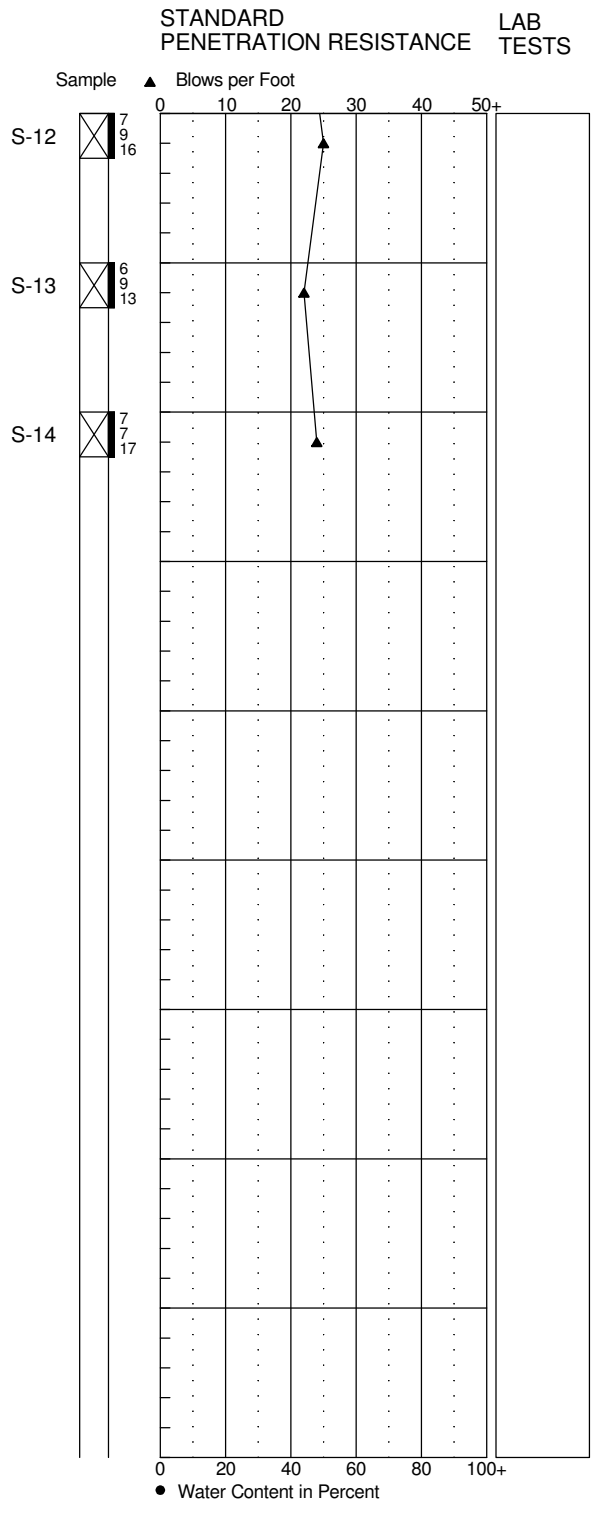
Figure A-3 ***1/2***

Boring Log HC-103

Location:
Approximate Ground Surface Elevation: 100 Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez

USCS Class	Graphic Log	Soil Descriptions	Depth in Feet
CH		Very stiff to hard, damp to moist, gray CLAY with occasional non-horizontal partings. (cont'd)	45
			50
			55
		Bottom of Boring at 56.5 Feet. Started 12/11/14. Completed 12/11/14.	
			60
			65
			70
			75
			80
			85
			90



NEW BORING LOG 1904003-BL.GPJ HC_CORP.GDT 1/23/15

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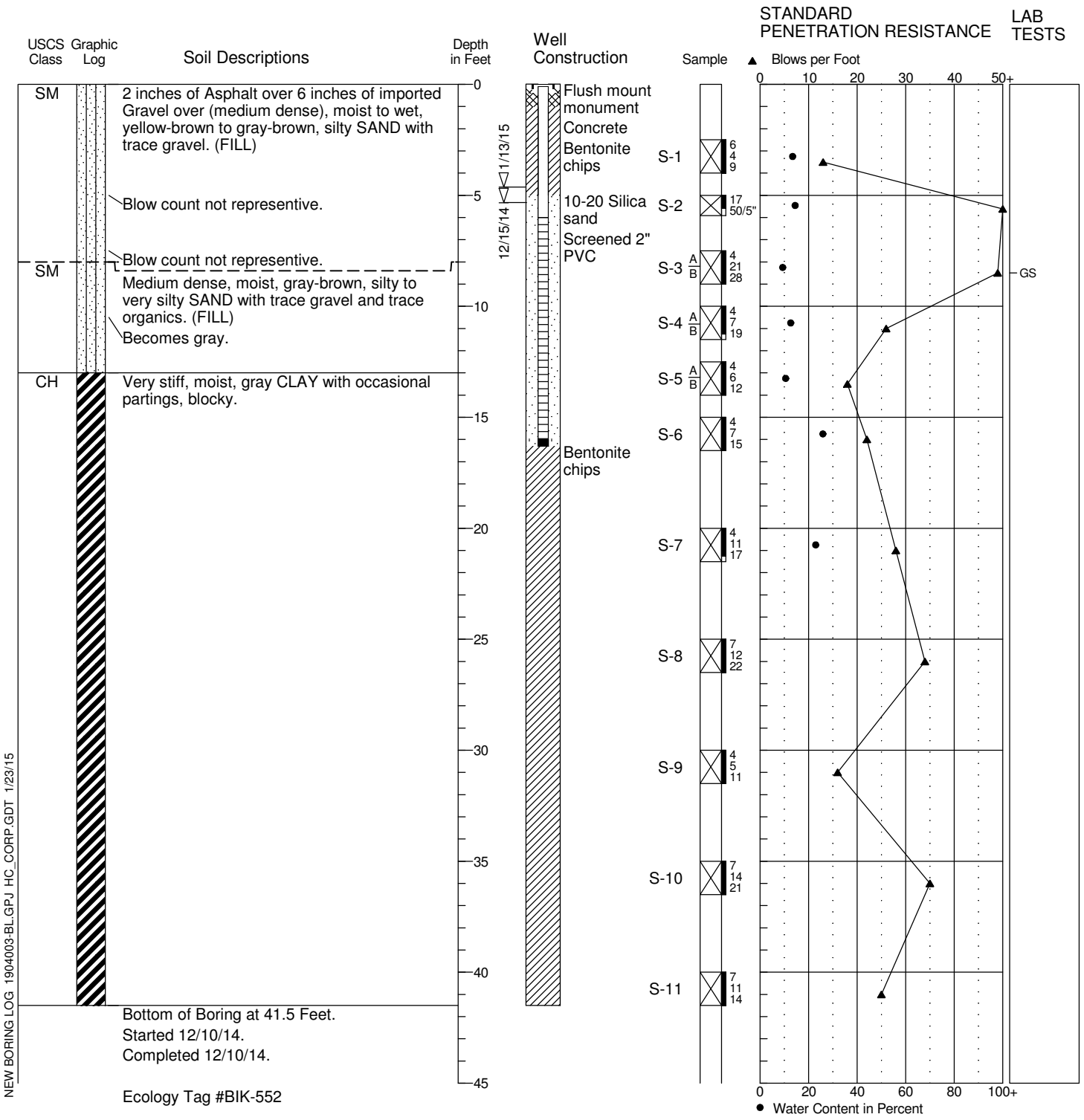
HARTCROWSER

19040-03 ***12/14***
Figure A-3 ***2/2***

Boring Log HC-104

Location:
Approximate Ground Surface Elevation: 85 Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
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HARTCROWSER

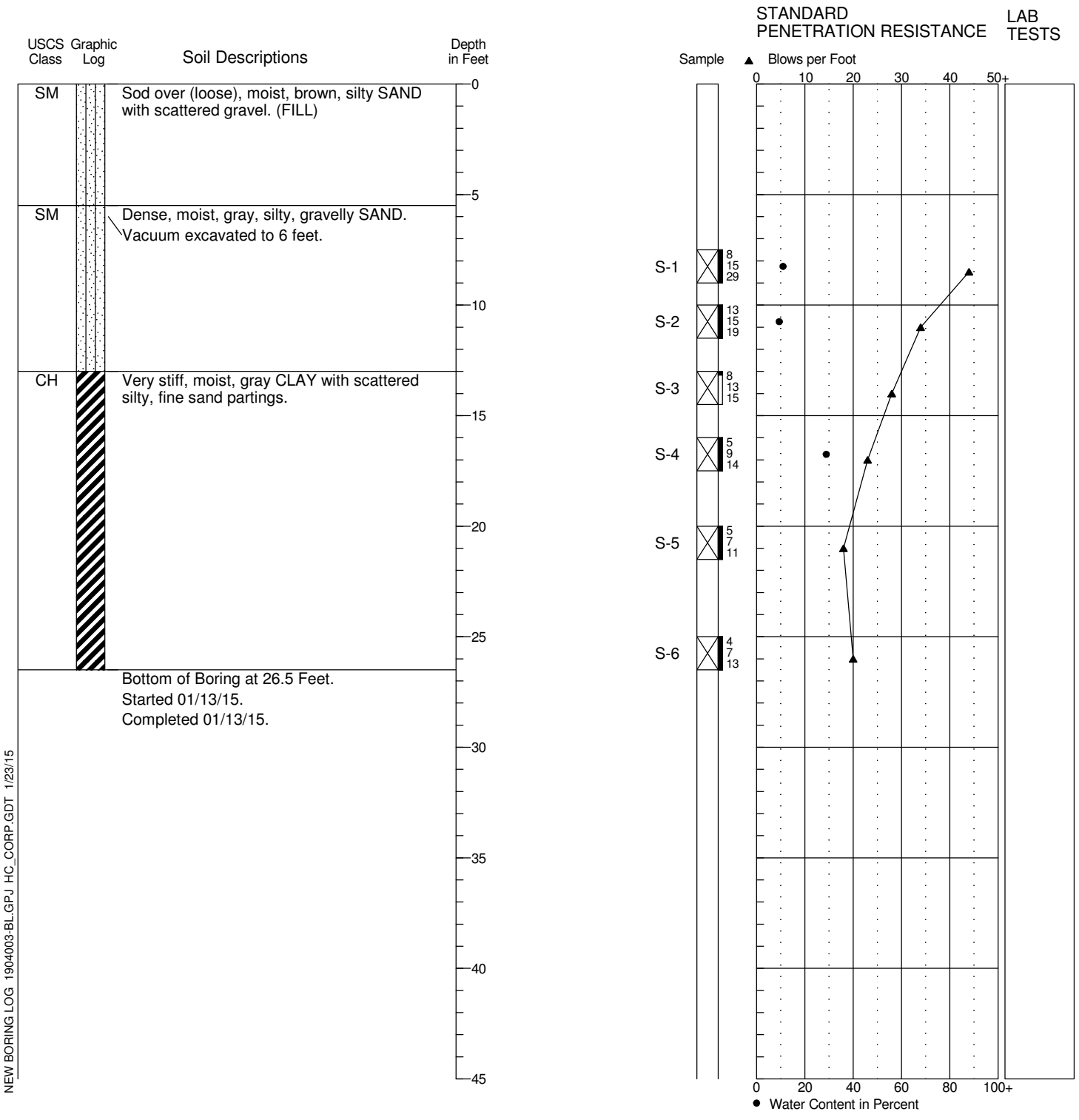
19040-03 ***12/14***

Figure A-4

Boring Log HC-106

Location:
Approximate Ground Surface Elevation: Feet
Horizontal Datum:
Vertical Datum:

Drill Equipment: Landa Track/HSA
Hammer Type: SPT w/140 lb. Automatic hammer
Hole Diameter: inches
Logged By: B. McDonald Reviewed By: C. Valdez



NEW BORING LOG 1904003-BL.GPJ HC_CORP.GDT 1/23/15

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HARTCROWSER

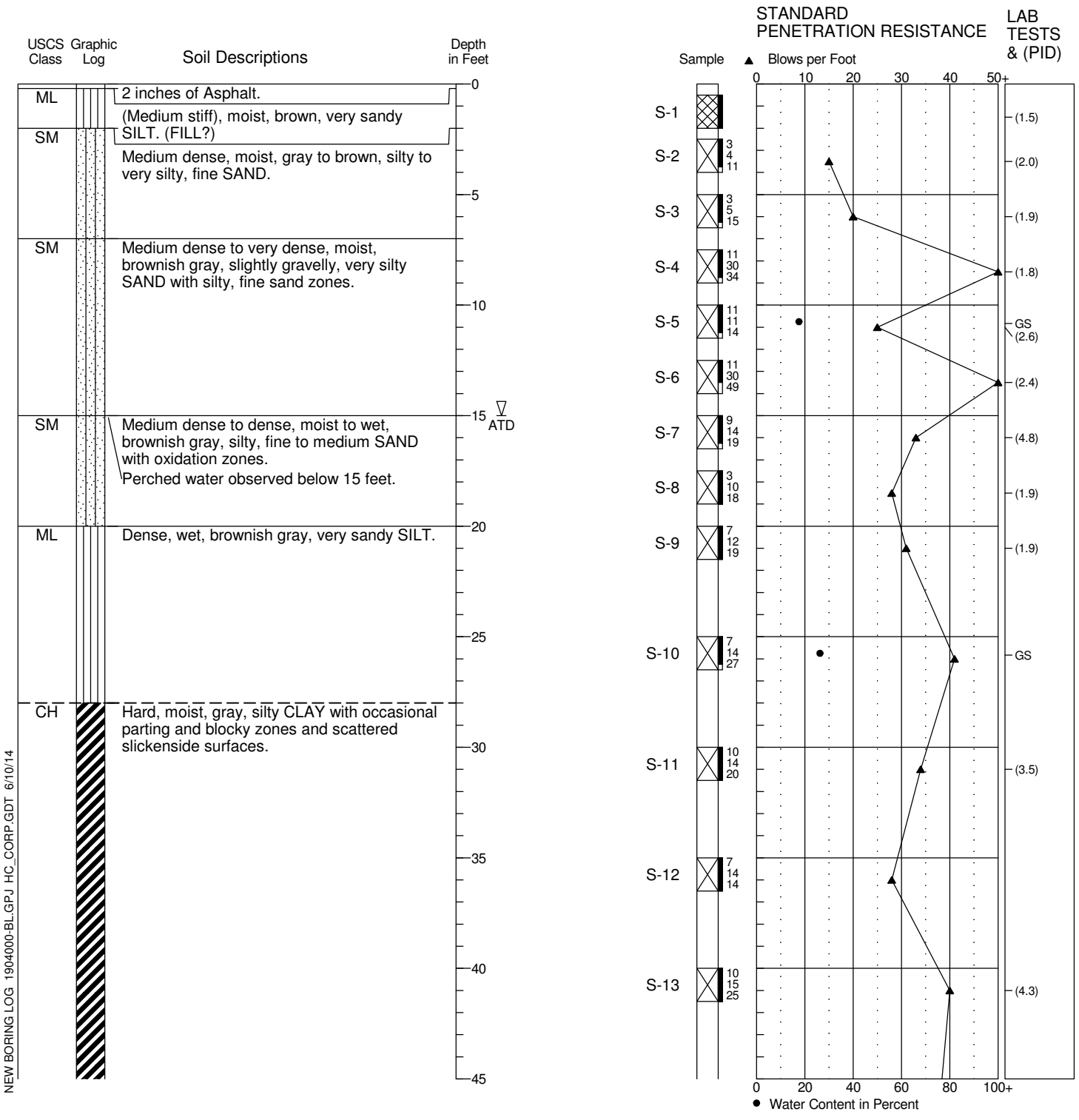
19040-03 ***1/15***

Figure A-5

Boring Log HC-101

Location: Lat: 47.621033 Long: -122.357462
Approximate Ground Surface Elevation: ~95 Feet
Horizontal Datum: WGS84
Vertical Datum: NAVD88

Drill Equipment: Mobile B-60/HSA
Hammer Type: SPT w/ 140 lb. Auto Hammer
Hole Diameter: 6 inches
Logged By: B. McDonald Reviewed By: W. McDonald



NEW BORING LOG 1904000-BL.GPJ HC_CORP.GDT 6/10/14

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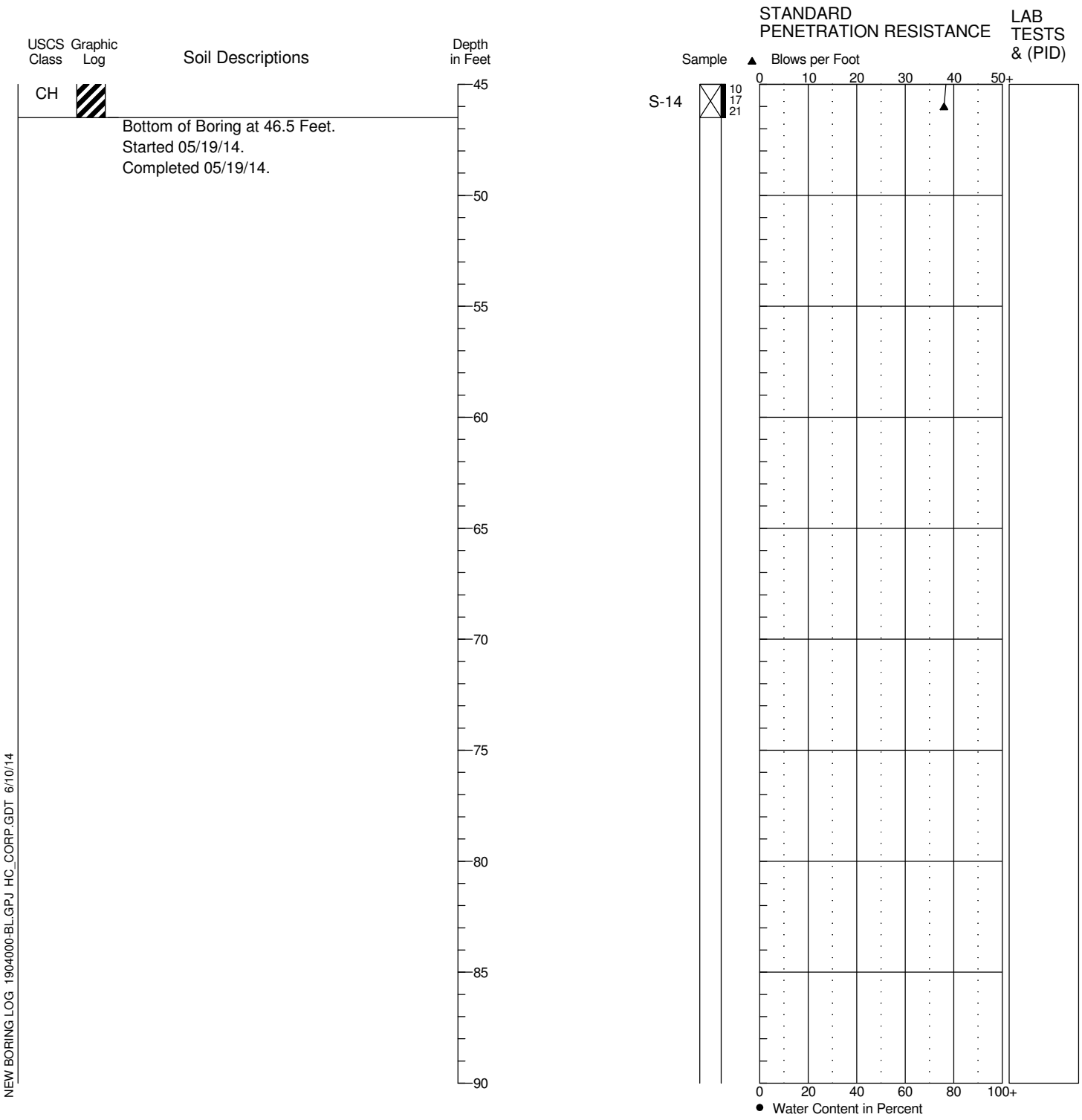
HARTCROWSER

Boring Log HC-101

Location: Lat: 47.621033 Long: -122.357462
Approximate Ground Surface Elevation: ~95 Feet
Horizontal Datum: WGS84
Vertical Datum: NAVD88

Drill Equipment: Mobile B-60/HSA
Hammer Type: SPT w/ 140 lb. Auto Hammer
Hole Diameter: 6 inches
Logged By: B. McDonald Reviewed By: W. McDonald



NEW BORING LOG 1904000-BL.GPJ HC_CORP.GDT 6/10/14

1. Refer to Figure A-1 for explanation of descriptions and symbols.
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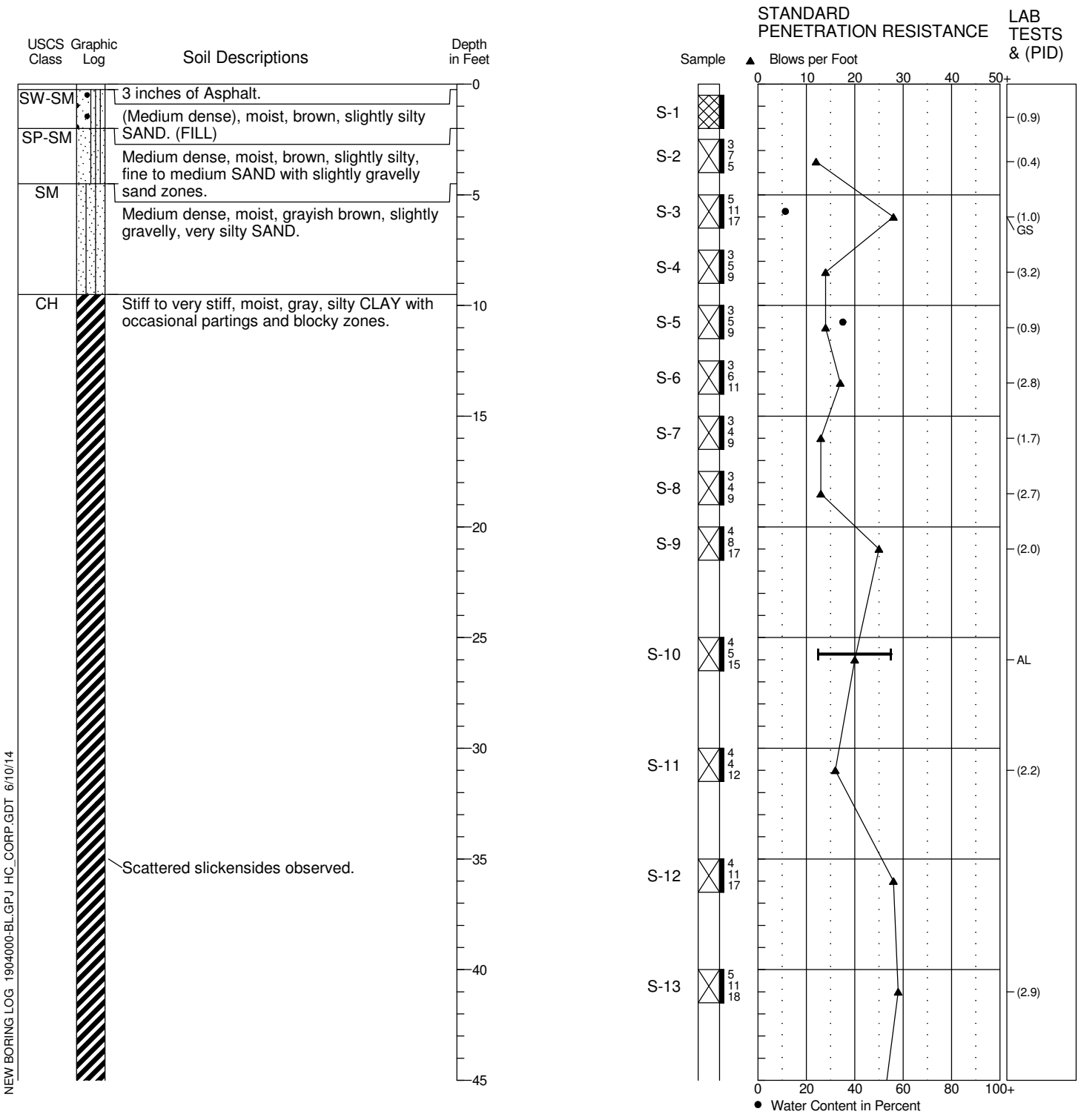
HARTCROWSER

19040-00 ***5/14***
Figure A-2 ***2/2***

Boring Log HC-105

Location: Lat: 47.621645 Long: -122.357887
Approximate Ground Surface Elevation: ~92 Feet
Horizontal Datum: WGS84
Vertical Datum: NAVD88

Drill Equipment: Mobile B-60/HSA
Hammer Type: SPT w/ 140 lb. Auto Hammer
Hole Diameter: 6 inches
Logged By: B. McDonald Reviewed By: W. McDonald



NEW BORING LOG 1904000-BL.GPJ HC_CORP.GDT 6/10/14

1. Refer to Figure A-1 for explanation of descriptions and symbols.
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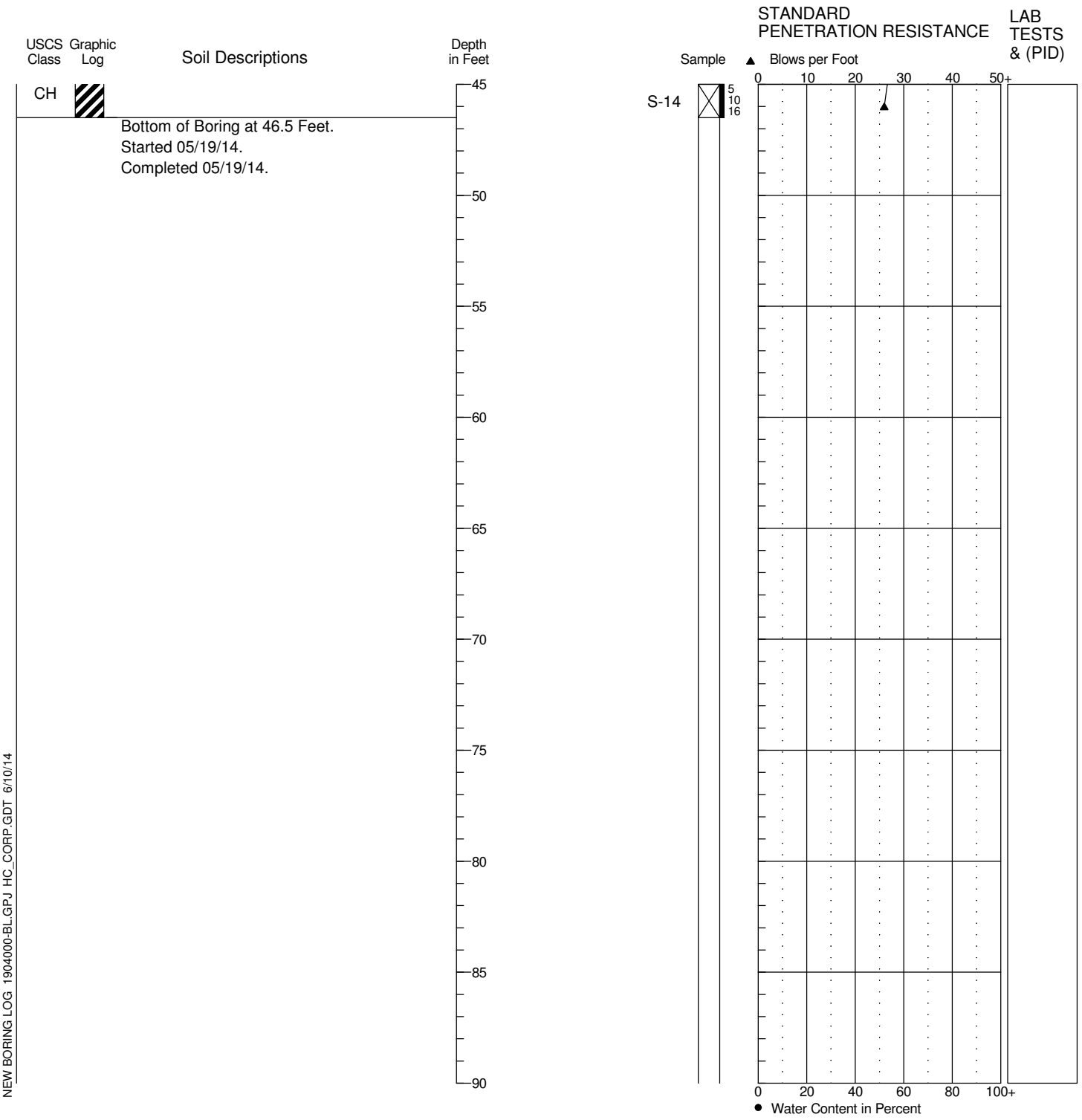
HARTCROWSER

19040-00 *5/14*
Figure A-3 *1/2*

Boring Log HC-105

Location: Lat: 47.621645 Long: -122.357887
Approximate Ground Surface Elevation: ~92 Feet
Horizontal Datum: WGS84
Vertical Datum: NAVD88

Drill Equipment: Mobile B-60/HSA
Hammer Type: SPT w/ 140 lb. Auto Hammer
Hole Diameter: 6 inches
Logged By: B. McDonald Reviewed By: W. McDonald



NEW BORING LOG 1904000-BL.GPJ HC_CORP.GDT 6/10/14

1. Refer to Figure A-1 for explanation of descriptions and symbols.
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HARTCROWSER

19040-00 ***5/14***
Figure A-3 ***2/2***