Remedial Investigation (RI)

Boylston Property
(Former BMW Seattle Property)
714 East Pike/715 East Pine Street
Seattle, Washington

Prepared for
Seattle Core Development Site I

January 31, 2013
17859-02

HARTCROWSER

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Prepared by
Hart Crowser, Inc.

Angie Goodwin Julie K.W. Wukelic

Angie Goodwin, LHG
Project Hydrogeologist

Julie K. W. Wukelic
Senior Principal

1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Fax 206.328.5581
Tel 206.324.9530

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REMEDIAL INVESTIGATION (RI)
BOYLSTON PROPERTY
(FORMER BMW SEATTLE PROPERTY)
714 EAST PIKE/715 EAST PINE STREET
SEATTLE, WASHINGTON

1.0 INTRODUCTION

This report presents the Remedial Investigation (RI) for the Boylston property (former BMW Seattle property - Capitol Hill Properties) in Seattle, Washington (Figure 1). This RI compiles and summarizes results of past site investigations and underground storage tank (UST) removal, and a more recent site investigation on the Boylston property. It also presents a chronology of the work completed and a summary of current site conditions. This RI has been formatted for consistency with elements listed in WAC 173-340-350 Remedial Investigation and Feasibility Study, WAC 173-340-360 Selection of Cleanup Actions, and other pertinent sections of MTCA. Laboratory analytical data for testing results summarized in this RI report is provided within the source data reports referenced herein.

Soil on the Boylston property is impacted by historical releases of total petroleum hydrocarbons (TPH) from on-site operations and former USTs, and by releases of metals from automobile spring manufacturing activities. The Boylston property was granted a No Further Action (NFA) determination in 1999 based on prior site investigations and implementation of institutional controls (*i.e.* a Restrictive Covenant).

In 2012, the Boylston property owner, Seattle Core Development Site I, LLC re-entered the Boylston property into the Voluntary Cleanup Program (VCP) with the Washington State Department of Ecology (Ecology) pursuant to the Model Toxics Control Act (MTCA – RCW 70.105D.040(5)) as the Boylston property will be redeveloped in the near future. The proposed redevelopment will include three levels of underground parking, street-level retail space, and several floors of residential units. The underground parking excavation (approximately 35 feet deep) will require removal and disposal of impacted soil from a substantial portion of the Boylston property. Some areas of the Boylston property will only be minimally disturbed for footing excavation and grading during site development (less than 10 feet below grade).

Pursuant to negotiations and written agreement with Ecology, the ongoing investigation of the Boylston property has been permitted to proceed despite the continued existence of the Restrictive Covenant. The current plan of action

involves submitting a request to rescind the Restrictive Covenant after a Cleanup Action Plan (CAP) is prepared for the redevelopment of the Boylston property.

2.0 FACILITY BACKGROUND

2.1 Site Description and Use

The Boylston property covers approximately 54,000 square feet (1.26 acres) in Seattle, Washington (Figure 1), in the Capitol Hill neighborhood. The Boylston property occupies most of the block that is bounded by East Pike and East Pine Streets and Boylston and Harvard Avenues.

The Boylston property includes two buildings (one located at 714 East Pike and one at 715 East Pine Street) and three parking lots (west, east, and southwest). The property was the former BMW Seattle dealership location and was used for various historical operations, including an automobile spring manufacturer and an auto repair facility.

The 715 East Pine Street building is currently vacant. Property features in the 715 East Pine Street building (former Maintenance Shop) include an auto parts storage area; a 5,000-gallon diesel UST closed in place in 1998; a former hydraulic, bulk, and used oil tank area; a former recessed waste oil tank area, and former aboveground hydraulic lifts. The historical uses of the 715 East Pine Street property are described below (LFR 2008 and ThermoRetec 2001):

- 1906 to 1914 - occupied by a skating rink;
- 1914 to 1919 - occupied by an auto garage;
- 1920 to 1930 - occupied by an auto repair shop;
- 1930 to 1944 - occupied by Pacific Auto Wreckers;
- 1944 to 1953 - occupied by 2nd Hand Auto Parts;
- 1953 to 1958 - unknown and possibly vacant;
- 1958 to 1985 - owned by Laher Auto Springs Company (building burned down in 1966 and rebuilt in 1967);
- 1985 to 1990 - owned by Phil Smart Mercedes-Benz and operated as BMW Seattle's service center;
- 1990 to 2006 - owned by Norman Enterprises, Inc. and still operated as BMW Seattle's service center;
- 2006 to 2012 - owned by Pryde Johnson Pike/Pine, LLC, and was occupied by BMW Seattle's service center until 2011; and
- 2012 to present - owned by Seattle Core Development Site I.

The 714 East Pike Street building is currently occupied in part by a sports drink company, while the remainder of the building is vacant. Site features of the 714 East Pike Street property (former BMW Sales Showroom) include a heating oil UST closed in place in 1986. The historical uses of the property are described below (LFR 2008 and ThermoRetec 2001):

- 1920 to 1981 - the building was constructed in 1920 according to the King County Tax Assessor and was owned by Laher Auto Springs Company, which manufactured automobile springs;
- 1985 to 1990 - owned by Phil Smart Mercedes-Benz and operated as BMW Seattle's sales showroom;
- 1990 to 2006 - owned by Norman Enterprises, Inc. and was occupied by BMW Seattle as a sales showroom;
- 2006 to 2012 - owned by Pryde Johnson Pike/Pine, LLC, and was occupied by BMW Seattle as a sales showroom until 2011; and
- 2012 to present - owned by Seattle Core Development Site I, LLC.

The western parking lot along Boylston Avenue was occupied by a multi-family residence (St. Clair Apartments), which was torn down during the 1990s. The eastern parking lot along Harvard Avenue and the southwestern parking lot on the corner of Pike Street and Boylston Avenue were historically occupied by apartment buildings in 1969 and subsequently torn down. A 2,000-gallon diesel UST was removed from the southwestern paved parking lot in 1994.

2.2 Surrounding Properties

The Boylston property shares the block with the following buildings:

- Linda's Restaurant (former dry cleaner) and corner grocery store to the northwest;
- 15th Avenue Garage (auto garage with two tenants - Red Moto's motorcycle shop and Bill's Off Broadway restaurant) to the northeast;
- Paved parking lots to the east;
- Bar and restaurant to the southeast;
- Paved parking lot to the southwest; and
- Paved parking lot and apartment building to the west.

A mixture of commercial, office, and residential properties surround the property. The Boylston property block is surrounded by:

- A parking garage and two restaurants across East Pine Street;
- Seattle Central Community College across Harvard Avenue;
- Apartment buildings and street-level retail across East Pike Street; and

- An apartment building with street-level retail, apartment building, garage, hotel, and Mercedes Benz auto showroom across Boylston Avenue.

The Boylston property is located within the City of Seattle city limits. The property and surrounding businesses and residences receive their drinking water from the municipal water supply.

2.3 Potential Sources of Environmental Contaminants

Adjacent Historical Dry Cleaner. A historical dry cleaner (705 East Pine) occupied the adjacent site, which is currently Linda's Restaurant (709 East Pine). The site was reportedly occupied by a laundry and dry cleaner from 1944 to 1975. This property is adjacent to and (because of the configuration) both upgradient and downgradient of the Boylston property.

Adjacent Auto Garage and Motorcycle Shop. The 15th Avenue Garage property has occupied the eastern adjacent property since 1920. Volatile organic compounds (VOCs), including chlorinated solvents, are often used in automotive repair and maintenance services such as parts cleaning, degreasing, and painting. Other potential contaminants from these adjacent properties include TPH compounds and metals. The 15th Avenue Garage is adjacent to and upgradient of the Boylston property.

Automobile Spring Manufacturing. Laher Auto Spring Company was located in the main two buildings of the Boylston property (714 East Pike Street and 715 East Pine Street). Historical activities included metal forging and foundry operations. Foundry slag and metal debris were noted during past sampling activities, though none were encountered during the most recent investigations.

Metals-impacted soil has been identified in the shallow soil in the center of the property. Most of the metals-impacted soil was detected in the 0- to 4-foot range with some detections as deep as 8 feet. Based on the locations of the metal-impacted soil, the likely source has been identified as the former auto spring manufacturing company. Former automotive repair and service operations on the Boylston property may also have contributed to the metal-impacted soil.

Only three previous samples were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals, and two of those samples contained leachable lead concentrations that exceeded the Dangerous Waste designation criteria (ThermoRetec 2001b).

Underground and Aboveground Storage Tanks. A total of three USTs were previously or currently located on the Boylston property. The 2,000 gallon diesel UST is located in the southwest paved parking lot and was removed in 1994. The heating oil UST (estimated at 400 gallons) is located in the northwestern corner of the 714 East Pike Street building and was closed in place in 1986. The 5,000-gallon diesel UST is located in the southwestern corner of the 715 East Pike Street building and was closed in place in 1998.

Two aboveground storage tanks (ASTs) areas were previously located in the 715 East Pine Street building. The hydraulic, bulk, heating, and used oil ASTs were located in the northeast corner of the building and have been removed (date unknown). The recessed waste oil tank area was located in the south east corner of the building, and contained ASTs with waste Pennzoil oil and other auto fluids. These ASTs have been removed along with impacted soils (date unknown, but believed to be between 1994 and 1995).

Most of the previous soil samples analyzed for TPH were from borings advanced to depths of less than 20 feet. However, TPH impacts have been detected in soil deeper than 20 feet in multiple borings. One historical boring location (TPH5922) had detected concentrations of diesel-range TPH that exceeded MTCA Method A soil cleanup levels at 40 feet below ground surface.

2.4 Regulatory History

A 2,000-gallon diesel fuel oil UST located in the southwest parking lot was decommissioned and removed in 1994. Contaminated soil was removed at that time and confirmation soil samples were collected from the side walls and bottom of the excavation. The results of chemical analysis indicate that all confirmation samples were below detection limits for TPH.

A 400-gallon heating oil UST located in the central area of the Boylston property was closed in place in 1986. Soil samples were collected near the 400-gallon tank and analyzed for TPH in 1990. Two borings were drilled near the UST to 10.5 and 11 feet deep. The results indicated that TPH concentrations were below MTCA Method A soil cleanup levels.

A 5,000-gallon diesel fuel oil UST was closed in place in 1998 in the southwest portion of the Former Maintenance Shop area. Soil samples were collected under the UST by drilling through the bottom of the tank when it was decommissioned. The results indicate that soil beneath the tank was impacted with TPH constituents (primarily diesel) above MTCA Method A cleanup levels.

The Boylston property entered the VCP on August 21, 1998. Ecology provided a No Further Action (NFA) letter with a Restrictive Covenant for the property dated January 25, 1999 (Appendix A), and the file was closed on March 31, 1999. The NFA confirmed that the contamination did not pose a risk to human health or the environment under current land use conditions. Ecology confirmed that the contamination was contained by concrete flooring and asphalt pavement, and did not pose a threat to groundwater. The Restrictive Covenant contained deed restrictions to maintain the surface cap over the contaminated soil.

The Boylston property was re-admitted into the VCP program on December 28, 2012.

3.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND REMEDIAL ACTIONS

Hart Crowser and others have conducted several environmental field investigations, remedial actions, and groundwater sampling and analysis events on the Boylston property since 1989. These activities are summarized below in chronological order. The most recent investigation was conducted in November 2012 and the specific results are presented in section 4.0. All available exploration locations are shown on Figure 2. A list of available reports regarding environmental conditions at the Boylston property is provided in Section 8.0.

3.1 1989 to 1994 - Environmental Site Assessment and Underground Storage Tank Removal (Hart Crowser and RZA AGRA)

In 1989, Hart Crowser conducted an environmental site assessment on the Boylston property. The report concluded that potential contamination from past operations at the property was present and recommended chemical analysis for TPH and metals in soil samples collected near the fuel oil UST.

In 1990, Hart Crowser advanced two borings on both sides of the UST. Soil analytical results identified TPH-impacted soil, but the concentrations were below MTCA Method A cleanup levels. Soil analytical results identified elevated concentrations of lead above MTCA Method A cleanup levels and copper and zinc above background levels.

In 1994, RZA AGRA observed and reported on the decommissioning and removal of a 2,000-gallon diesel UST in the southwest parking lot. Contaminated soil was removed and disposed of at Rabanco Regional Landfill. Confirmation soil samples were collected from the side walls and bottom of the

excavation and submitted for chemical analysis. The results indicate that all confirmation samples were below detection limits for TPH.

In 1994, Hart Crowser conducted another environmental site assessment on the Boylston property and recommended that if and when the closed-in-place UST from the 1989 report is removed, the TPH-impacted soil around the UST be remediated. The report also recommended that the recessed waste oil containment structure in the central area be removed and appropriately disposed.

3.2 1995 to 1998 - Site Characterization (Hazcon, ContraCon Northwest, and RETEC)

In 1995, Hazcon conducted two investigations to determine the extent of shallow contamination in the soil underlying the Boylston property, and to determine the necessity, cost, and feasibility of cleanup. The reports identified and estimated two distinct zones of contamination. The shallow zone (0 to 4 feet deep) was estimated to be approximately 2,300 square feet and the deep zone (6 to 26.5 feet deep) was estimated to be approximately 1,500 square feet with an average thickness of 15 feet. The shallow zone impacts included TPH, cadmium, and lead. The deep zone impacts included TPH, ethylbenzene, xylene, and naphthalenes. The report recommended additional borings to determine vertical and lateral extent of soil impacts in the central area of the property.

In 1996, ContraCon Northwest conducted additional soil investigation to determine the extent of contamination and to make remediation recommendations. The report identified TPH-impacted soil above MTCA Method A cleanup levels in the central area of the Boylston property extending to a depth of 40 feet (soil sample number TPH5922). Cadmium- and lead-impacted soil was also identified in the central area to depths of 7 feet.

In 1998, RETEC conducted a site risk assessment to request an NFA from Ecology. The report reviewed available site data, described the UST closure in the southwest portion of the former maintenance area, and performed a risk analysis. The report concluded that a NFA request was appropriate because the site conditions did not pose a threat to potential receptors and because a deed restriction would address soil-handling considerations in the event the existing cap materials were removed.

3.3 1999 - No Further Action Letter (Ecology)

On January 25, 1999, Ecology issued a No Further Action Determination Letter with a Restrictive Covenant (Appendix A) for the Boylston property. The Restrictive Covenant contains deed restrictions that focus on the maintenance of a cap over the contaminated soil and requires that any modification to the cap or removal of contaminated soil be performed in a manner consistent with regulatory requirements. The Restrictive Covenant also contains notification requirements for any modifications to the deed restrictions.

3.4 2001 to 2006 - Phase I Environmental Assessment and Supplemental Phase II Environmental Site Assessment (ThermoRetec and Geotech Consultants)

In 2001, ThermoRetec conducted a Phase I Environmental Assessment report and produced a memorandum titled Environmental Cost for Alternative Redevelopment Scenarios (ThermoRetec 2001b). Both documents confirmed that the soil in the central area of the Boylston property had metal contamination, and that two of three samples contained leachable lead concentrations that exceed the Dangerous Waste criteria. The documents did not identify the specific samples that exceeded the Dangerous Waste criteria, though they were noted as being from the cluster of soil samples collected within the former foundry/forge areas.

In April 2006, Geotech Consultants conducted a Supplemental Phase II Site Assessment to determine if USTs were present on the Boylston property and to determine the extent of the impacted soil. UST were not found using geophysical surveys. TPH was detected in a soil sample from the eastern parking lot (sample B26) with concentrations below MTCA Method A cleanup levels.

3.5 2008 to 2012 - Geotechnical Studies (Golder and Hart Crowser)

In 2008, Golder conducted a geotechnical investigation to investigate subsurface conditions and provide geotechnical recommendations for the proposed development. Four borings were advanced to depths of 29 to 36 feet and encountered a Fill unit over a Till unit over an Advanced Outwash unit.

In 2012, Hart Crowser conducted a geotechnical investigation to further assess subsurface conditions, to assist the structural engineer in developing foundation design criteria, and provide geotechnical recommendations for the proposed development. Seven push probes were advanced in strategic locations on the Boylston property to identify the Fill unit's thickness, which ranged from 6.5 to 9.5 feet.

4.0 CURRENT SITE INVESTIGATION

4.1 Soil and Groundwater Sampling and Analysis Scope of Work

Field work was completed in October and November 2012 and included the following activities:

- Completed push probe explorations at 16 locations to depths of 10 to 15 feet. Continuous soil samples at each probe location were used for soil classification and field screening using water sheen and headspace vapor methods.

- Completed hollow-stem auger explorations at seven locations to depths of 35 to 45 feet. Soil samples were collected at 5-foot intervals at each boring location and were used for soil classification and field screening using water sheen and headspace vapor methods.

- Completed and installed two monitoring well locations using a hollow-stem auger. Monitoring wells MW-1 and MW-2 were drilled to depths of 54 and 62 feet deep, respectively. Soil samples were collected at 5-foot intervals at each location. The soil samples were classified and screened in the field using water sheen and headspace vapor methods. The monitoring wells were developed and groundwater samples were collected from each well and submitted for chemical analysis.

- Selected one or more soil samples from each exploration for chemical analysis based on field screening results and historical chemical data.

The 91 soil samples selected were submitted for the following chemical tests:

- Gasoline-range hydrocarbons (TPH-G) by NWTPH-Gx;
- Diesel- and oil- range hydrocarbons (TPH-D and TPH-O) by NWTPH-Dx;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc) by EPA Method 7010/7471A; and
- TCLP for lead, cadmium, and zinc by EPA Method 1311/7010.

The two groundwater samples collected were submitted for the following chemical tests:

- TPH-G by NWTPH-Gx;
- TPH-D and TPH-O by NWTPH-Dx;
- VOCs by EPA Method 8260B; and

- Total metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc) by EPA Method 7010/7470A.

The locations of the explorations are provided on Figure 2. A detailed description of the field methods and logs of the explorations are presented in Appendix B. A chemical data quality review and laboratory reports are provided in Appendix C.

4.2 Chemical Analysis Results

The soil and groundwater sampling results were compared to MTCA Method A cleanup levels established by Ecology. The soil and groundwater analytical results and relevant MTCA cleanup levels are presented in Tables 2 and 3.

4.2.1 Soil Sample Analytical Results

Analytical results for soil samples are summarized in Table 2. Field screening results were recorded on the exploration logs in Appendix B. Figure 3 illustrates the occurrence of TPH in soil and Figure 4 presents metal (lead and cadmium) exceedances in soil.

Historically, TPH-D, TPH-O, lead, and cadmium were detected in soil above MTCA Method A cleanup levels. TCLP for lead exceeded the Dangerous Waste criteria in two samples in ThermoRetec's 2001b memorandum. The 2001b ThermoRetec memorandum does not identify the specific samples, though they were noted as being from the soil samples collected in the center of the Boylston property.

The results of the recent Phase II sampling confirmed the presence of TPH-D, TPH-O, and metals, including exceedances above MTCA Method A cleanup levels, though no exceedances of the Dangerous Waste criteria for lead were detected in any of the soil samples analyzed for TCLP.

No chlorinated solvent VOCs were detected in any of the soil samples that were analyzed.

TPH-G and associated gasoline-related VOCs were detected in soil samples from two locations, HCE-7 and MW-2 in the upper 16.5 and 21.3 feet, respectively. TPH-G was not identified in previous investigations as a chemical of concern. The recent data establishes that the TPH-G impacts are isolated and not widespread.

The recent analytical results are summarized below for specific areas.

4.2.1.1 Adjacent Historical Dry Cleaner

Explorations HCE-1 through HCE-3 and MW-1 were sampled along the west and north property lines adjacent to 709 East Pine. Soil sample analytical results were non-detect for TPH-D, TPH-O, TPH-G, and VOCs. Low concentrations of metals were detected in the soil samples, but were below MTCA Method A soil cleanup levels and within or below background concentrations in Puget Sound (Ecology 1994).

These results indicate that the Boylston property soils have not been impacted by any historical release from the former dry cleaners/laundry site.

4.2.1.2 Adjacent Auto Garage and Motorcycle Shop

Explorations HCE-4 through HCE-6 were sampled along the east property line adjacent to the auto garage and motorcycle shop properties. Soil sample analytical results were non-detect for TPH-D, TPH-G, and VOCs. TPH-O concentrations were non-detect with the exception of boring HCE-6 (sample S2 at a depth of 7 feet) with a concentration of 5,400 mg/kg, which exceeds the MTCA Method A soil cleanup level of 2,000 mg/kg. Sample S3 (depth of 12 feet) has a TPH-D concentration of 97 mg/kg, which is below the MTCA Method A soil cleanup level.

Metals were either not detected or detected at low concentrations in the soil samples that were both below MTCA Method A soil cleanup levels and within or below background concentrations in Puget Sound (Ecology 1994).

These results indicate TPH-O exceeds MTCA Method A soil cleanup levels in a specific isolated location along the east property line to an approximate depth of 7 to 10 feet, which is within the planned excavation area. The horizontal extent of these TPH-O exceedances is delineated to the west by the data gap explorations HCE-16 and HCE-17. The extent of the TPH-O impacts to the east can not be further delineated without an off-site investigation inside the adjacent building. However, the planned excavation and construction along this east property boundary line will include a concrete foundation wall that will serve as a barrier to any potential future migration of TPH-O contamination from the adjacent property, if any contamination remains on the adjacent property. In addition, the new construction will include footing drains around the building perimeter, further mitigating any potential for petroleum migration onto the Boylston property.

4.2.1.3 Automobile Spring Manufacturing and Storage Tanks (Central Area)

Additional soil samples were collected and analyzed in the central area of the Boylston property to characterize the lateral and vertical extent of known metal-impacted soil and the vertical extent of the TPH-impacted soil. The center of the Boylston property was gridded in approximately 20-foot squares with eight sample locations (HCE-7 through HCE-14). MW-2 was also installed downgradient of this area to assess potential metal- and/or TPH-impacts to the groundwater.

Metal-Impacted Soil. Arsenic, cadmium, chromium, and mercury were not detected in the 14 soil samples submitted for metals analysis from this area. Lead was detected at low concentrations ranging from 1 to 1.9 mg/kg and was below the MTCA Method A cleanup level of 250 mg/kg. Copper, nickel, and zinc concentrations were also low. Though there is not an established MTCA Method A cleanup level for copper, nickel, or zinc in soil, the concentrations detected were low and within background levels in Puget Sound for these constituents (Ecology 1994).

TCLP metals were analyzed only in samples from 1 to 11.5 feet deep where the highest detected concentrations of total and TCLP metals in the soil were historically detected. Low TCLP metal concentrations were detected in 12 of the 16 samples submitted for analysis and were below the Dangerous Waste criteria.

TPH-Impacted Soil. TPH-D was detected in 11 soil samples from explorations HCE-7 and MW-2, at concentrations ranging from 20 to 5,500 mg/kg. Three samples (HCE-7 - samples S2, S3, and S5 at a depth of 6.5, 11.5, and 21.5 feet, respectively) contained TPH-D concentrations above the MTCA Method A soil cleanup level of 2,000 mg/kg. TPH-O was detected in 11 soil samples from explorations HCE-7 and MW-2 with concentrations ranging from 130 to 1,200 mg/kg, which is below the MTCA Method A soil cleanup level of 2,000 mg/kg.

TPH-G was detected in eight soil samples from explorations HCE-7 and MW-2, with concentrations ranging from 28 to 410 mg/kg. Five soil samples (three from MW-2 and two from HCE-7) contained concentrations of TPH-G above the MTCA Method A soil cleanup level of 100 mg/kg (without benzene present). These samples are located in the upper 16.5 feet in HCE-7 and upper 21.3 feet in MW-2. Other gasoline-related VOCs were detected in explorations HCE-7 and MW-2 at concentrations below the applicable Method A soil cleanup levels. Since there were no benzene constituents detected, the TPH-G soil impacts are indicative of weathered and aged gasoline.

HCE-7 and MW-2 are outside of the planned 35-foot-deep excavation for the underground parking. The specific western extent of these exceedances could not be determined due to lack of access to the adjacent property, the Boylston Apartments. However, previous borings and recent geotechnical borings near the property boundary adjacent to the Boylston Apartments did not indicate TPH impacts.

4.2.1.4 Data Gap Areas

Soil samples were collected, screened, and analyzed from explorations HCE-15 through HCE-23 located throughout the Boylston property. Soil sample analytical data results indicate that VOC and TPH were not detected, except TPH-O was detected in samples HCE-16-S2 (7 feet deep), HCE-17-S2 (9 feet deep), HCE-17-S3 (14 feet deep), and HCE-17-S4 (18.4 feet deep). Detected concentrations of TPH-O ranged from 68 to 1,500 mg/kg and are below the MTCA Method A soil cleanup level of 2,000 mg/kg. Low concentrations of metals were detected in soil samples, but were below MTCA Method A soil cleanup levels.

The results from these data gap locations helped characterize the nature and extent of the previously identified soil impacts. Most of the data gap explorations indicated no additional impacted areas. As discussed above, TPH-G and related VOC soil impacts were identified in an isolated area associated with soil borings HCE-7 and MW-2.

4.2.2 Groundwater Analytical Results

Two groundwater monitoring wells were installed to further assess the Boylston property's groundwater quality. The groundwater sample analytical results from monitoring wells, MW-1 and MW-2, are summarized in Table 3. TPH-D, TPH-O, TPH-G, total metals, and VOCs were not detected in any groundwater samples. Chlorinated solvent VOCs were not detected in the soil or groundwater on the property. Therefore, these groundwater sample results indicate that the on-site groundwater has not been affected by the known soil impacts or any off-site contamination.

5.0 SITE PHYSICAL CHARACTERISTICS

5.1 Geology

The geologic units at the Boylston property consist of Fill, Till, and Advanced Outwash sand units. The Fill unit consists of silty, gravelly Sand with concrete or

brick fragments with an approximate thickness of 5 to 10 feet. Underlying the Fill unit, is a Till unit that consists of dense, silty, gravelly Sand to sandy Silt. The Advanced Outwash unit consists of sand and gravel with little silt and was observed in the deeper borings with depths ranging from 25 to 40 feet below ground surface. Three borings (HCE-2, HCE-5, and HCE-9) encountered a loose silty Sand to Sand zone between 30 and 35 feet deep. Most of the planned excavation will be within the Fill and Till units. In some areas, the excavation could break into the Outwash unit and the loose Sand zones. Cross sections showing generalized subsurface conditions at the Boylston property are provided on Figures 5 and 6.

5.2 Hydrogeology

Perched water was only encountered in push probe HCE-10 (located on the east side of the building) at 12.5 feet deep. A sample was not collected because of the limited volume of available groundwater in the push probe. Groundwater was encountered in monitoring wells MW-1 and MW-2 at 45 and 51 feet below ground surface, respectively. Groundwater samples were collected from these monitoring wells. Groundwater was observed in the Advanced Outwash unit in both monitoring wells. Groundwater levels could fluctuate depending on groundwater conditions including depth and volume, which may be caused by variations in rainfall, temperature, season, and other factors.

The surrounding area topography slopes down to the west and south toward Elliott Bay, located approximately 1 mile southwest of the Boylston property. The property elevation is higher to the northeast along East Pine Street and Harvard Avenue (approximate elevation 290 feet). The ground floor of the former BMW dealership building is at street level on East Pike Street (approximate elevation 280 feet). Based on surrounding area topography, groundwater is likely to flow to the west/southwest, toward Elliott Bay. The estimated gradient using MW-1 and MW-2 is approximately 0.05 feet/feet.

6.0 NATURE AND EXTENT OF CONTAMINATION

This section summarizes the environmental conditions in soil and groundwater at the Boylston property. Our understanding of site conditions is based on environmental data from the previous investigations and the current investigation summarized in Sections 3.0 and 4.0, and described in greater detail in reports referenced herein.

6.1 Identifying Potential Chemicals of Concern

Based on historical site use, the chemicals of potential concern at the Boylston property are TPH-D, TPH-O, TPH-G, BTEX, lead, and cadmium. Occurrences of chemicals of potential concern are described below.

6.2 Soil Quality

Total Petroleum Hydrocarbons. Based on the field screening and both historical and current sample analytical results, TPH-impacted soil is primarily located in the center of the Boylston property within the upper 10 to 20 feet (Figure 3). Most of the TPH- impacted soil in the area has been delineated both vertically and laterally. However, one historical boring (TPH5922) had TPH-impacted soil at a depth of 40 feet. Approximately 12 additional soil samples were collected and analyzed for TPH at depths between 25 and 45 feet. Of these samples, TPH was not detected in nine samples and TPH-D concentrations (20 to 44 mg/kg) were detected below MTCA Method A soil cleanup level (all from exploration MW-2). Therefore, based on this additional data, it is our opinion that the TPH historically detected at 40 feet is localized and does not extend below 45 feet.

TPH-G concentrations were detected above the MTCA Method A soil cleanup levels in soil samples from two borings (HCE-7 and MW-2) in the center of the Boylston property to depths of 26 feet. Based on the recent data in the central area and other areas of the Boylston property, the gasoline-range TPH appears to be limited to the area around borings HCE-7 and MW-2. Other gasoline-related VOCs were detected at concentrations below applicable Method A soil cleanup levels in soil samples from these borings. Since there were no benzene constituents detected, the gasoline-related soil impacts indicate weathered and aged gasoline. The TPH-G concentrations exceeding the MTCA Method A soil cleanup levels from MW-2 and HCE-7 were to depths of 21.3 feet and 16.5 feet, respectively, which are below the planned 10-foot excavation in the area around these borings.

TPH-O was detected in boring HCE-6 located further north in the Former Maintenance Shop Area to a depth of 10 to 12 feet. There were no other TPH-O detections in other boring locations on the Boylston property. The source of TPH may be historical releases from the motorcycle shop and auto repair facility located east of the Boylston property.

Metals. Historic metal impacts in the soil (specifically lead and cadmium) were previously documented in the center of the Boylston property to a depth of 8 feet. We collected and analyzed soil from depths of approximately 9 to 23 feet

to assess potential impacts below 8 feet and to determine if there were additional metal impacts that might be classified as dangerous waste.

The recent results indicate that metals were either not detected or detected at concentrations below the applicable MTCA Method A soil cleanup levels. None of the recent soil samples had concentrations of metals which would trigger designation of soil as a Dangerous Waste.

Based on the recent data, it is our opinion that the previously detected metal impacts are contained in the upper 8 to 10 feet in a limited area (Figure 4) and do not designate as Dangerous Waste.

Volatile Organic Compounds. We also collected and screened soil from borings advanced along the adjacent north boundary of the west side in areas both upgradient and downgradient of a historic dry cleaner, located at 709 East Pine Street. These locations were sampled to assess whether there were soil or groundwater impacts on the Boylston property that may have migrated from a historic release from the former dry cleaners. Results indicate that the Boylston property has not been impacted by any historical release from the adjacent dry cleaners.

6.3 Groundwater Quality

Two groundwater monitoring wells (Figure 2) were installed on the Boylston property to characterize groundwater quality. Groundwater was encountered in the two deep monitoring wells between 45 and 51 feet below ground surface. Groundwater samples were collected during the most recent site investigations to assess groundwater quality and potential impacts from the known shallow soil TPH, VOCs, and metal impacts. Groundwater samples were collected and analyzed for TPH, VOCs, and total metals. TPH, VOCs, and metals were not detected in any of the groundwater samples. Chemical concentrations in groundwater samples collected from the two monitoring wells are provided in Table 3.

6.4 Site Conceptual Model

Subsurface contamination at the Boylston property appears to have been caused by: (1) releases from former USTs and prior auto-service operations; and (2) former operations of the automobile spring manufacturer before 1989. The TPH contamination from former UST releases appears to have been primarily located in the central area of the Boylston property. Figure 3 shows the approximate distribution and depth of the TPH-impacted soils. Most of the impacted soil is

within the upper 10 to 20 feet, with only one sample location (TPH5922) to depths of 40 feet exceeding MTCA Method A soil cleanup levels.

The metal contamination from the former automobile spring manufacturer also appears to have been primarily located in the central area of the Boylston property. Figure 4 shows the approximate distribution of the metal-impacted soil. Metals-impacted soil is limited to the upper 10 feet. As stated in previous sections, two of three historical samples analyzed for TCLP metals in the central area exceeded the Dangerous Waste designation criteria for leachable lead. But an additional 16 soil samples recently collected between 1 and 11.5 feet deep in this area were analyzed for TCLP lead, cadmium, and zinc and none exceeded the Dangerous Waste designation criteria.

Groundwater was encountered in the two deep monitoring wells between 45 and 51 feet below ground surface. Based on the groundwater sampling results, groundwater is not being impacted by TPH, VOCs, or metals.

7.0 CLEANUP OBJECTIVES AND CRITERIA

7.1 Chemicals of Concern

We compared chemical occurrences to applicable MTCA Method A cleanup levels to identify chemicals of concern for each medium at the Boylston property. These chemicals of concern are as follows:

- **Soil.** TPH-D, TPH-G, TPH-O, BTEX, lead, and cadmium.
- **Groundwater.** None.

7.2 Potential Exposure Pathways

7.2.1 Direct Contact with Soil

TPH-D and TPH-G is primarily in shallow soil within the upper 20 feet, and only extends to a depth of 40 feet in one boring location (TPH5922). The potential for direct contact exposure is minimal due to the presence of asphalt and concrete pavement above the affected area (beneath the Boylston and surrounding properties).

7.2.2 Groundwater Protection

Groundwater is not impacted

7.2.3 Potential Vapor Intrusion

The potential for vapor intrusion from known contamination on the Boylston property is minimal due to the planned remediation as part of the redevelopment plans for the property. The Boylston property will be developed to include three floors of underground parking. Therefore, most of the contaminated soils will be removed during excavation and the concrete walls and floor will act as a barrier for residual volatile-related compounds that may remain, if any, under the building or that could migrate from off-site sources. In addition, the proposed underground parking garage will be ventilated to clear automobile exhaust, providing additional mitigation for any potential VOC vapors.

7.3 Remedial Action Objectives

Cleanup actions at the Boylston Property are designed to address the following Remedial Action Objectives (RAOs):

- **Prevent Direct Contact with Contaminated Soil.** Prevent direct contact with impacted soil exhibiting concentrations above MTCA unrestricted cleanup levels.

- **Protect Groundwater.** Address impacted soil to eliminate any potential for future groundwater impacts.

- **Mitigate Potential Vapors.** Address potential vapors from residual soil impacts that may remain under or around the proposed building.

Achieving Method A cleanup levels in all soil throughout the Boylston property is likely not achievable because of the impracticability of removing the isolated areas of TPH-impacted soil outside of the planned excavation. Any residual petroleum hydrocarbons exceeding MTCA Method A cleanup levels that are left in place can be addressed by appropriate institutional controls such as a deed restriction and maintenance of paved areas.

7.4 ARARs and Applicable Regulations

Potential remedial technologies will be evaluated in a separate feasibility study based on their ability to meet Applicable or Relevant and Appropriate Requirements (ARARs) associated with federal, state, and regional regulations. The following ARARs have been identified:

- **Model Toxics Control Act (MTCA 70.105D RCW, Chapter 173-340 WAC).** MTCA contains detailed requirements and Washington State's expectations for cleanup of contaminated sites.

- **State Environmental Policy Act (SEPA – 43.21 RCW, Chapter 197-11 WAC).** An environmental checklist is necessary as part of any permitting activity within the City of Ellensburg and pursuant to MTCA.

- **Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 WAC).** This regulation contains requirements for abandonment and construction of resource protection wells.

- **Dangerous Waste Regulations (Chapter 173-303 WAC).** This regulation addresses requirements for identification and proper management of dangerous wastes. Based on previous investigations, there may be a very small quantity of metal-impacted soil on the Boylston property that could be designated as Dangerous or Extremely Hazardous Wastes.

- **State Clean Air Act (RCW 70.94), General Regulations for Air Pollution Sources (Chapter 173-403 WAC), and Toxic Air Contaminant New Source Review Guidelines.** Emissions during any on-site treatment operations may be subject to these regulations and may require a Notice of Construction Permit.

7.5 Cleanup Levels

The Boylston property is a routine cleanup action, as defined in WAC 173-340-200, and involves relatively few constituents. Therefore, in accordance with WAC 173-340-700(5)(a), MTCA Method A cleanup levels may be used. (i.e., for unrestricted site uses). Cleanup levels for chemicals of concern are summarized in Table 4.

7.6 Terrestrial Ecological Evaluation

Ecology's policy for protection of terrestrial ecological receptors (Terrestrial Ecological Evaluation Procedures) is described in WAC 173-340-7490 of MTCA. The Boylston property also qualifies for an exclusion from a terrestrial ecological evaluation, as described in WAC 173-340-7491(c). The Boylston property qualifies as Barriers to Exposure, Undeveloped Land, and Background Concentrations based on the definition presented in WAC 173-340-7491(1)(b)(c)(d). Further, there is no potential exposure pathway to terrestrial wildlife at the property:

- The Boylston property is entirely paved where COCs in soil exceed applicable MTCA ecological indicator concentrations;

- All or most of impacted COCs in soil will be removed during redevelopment; and

- Where present, the depth to groundwater is more than 5 feet below ground surface.

The depth and location of contamination, therefore, is beyond the range of reasonable exposure scenarios.

8.0 REFERENCES

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Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval	Sampling Date	Concentration in mg/kg			
				Gas	Diesel	Heavy Oil	Heavy Oil (weathered gasoline)
S1a	Hazcon 1995	1 to 24"	3/20/1995	>20	<50	>100	22000
S1b	Hazcon 1995	36 to 40"	3/20/1995	>20	<50	>100	2200
S2	Hazcon 1995	0 to 24"	3/20/1995	<20	<50	>100	600
S3	Hazcon 1995	0 to 20"	3/20/1995	>20	<50	>100	24000
S4	Hazcon 1995	0 to 16"	3/20/1995	<20	<50	>100	1600
S5	Hazcon 1995	8 to 14"	3/20/1995	<20	<50	>100	4060
S6	Hazcon 1995	30"	3/20/1995	<20	<50	>100	430

	Reference	Concentration in mg/kg	
		S5 3/20/1995	S6 3/20/1995
Arsenic	Hazcon 1995	<5	<5
Barium	Hazcon 1995	939	87.2
Cadmium	Hazcon 1995	<2.5	6.8
Chromium	Hazcon 1995	17	505
Copper	Hazcon 1995	326	499
Lead	Hazcon 1995	1290	105
Mercury	Hazcon 1995	1.04	<0.05
Nickel	Hazcon 1995	26.5	91.5
Selenium	Hazcon 1995	<5	<5
Silver	Hazcon 1995	<2.5	<2.5
Zinc	Hazcon 1995	1280	93.4

Sample depth given in feet below ground surface.
TPHs, total petroleum hydrocarbons using WTPH-HCID.
Heavy Oil concentrations estimated from WTPH-HCID analysis.

Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg				
				TPH-D	TPH-D (ext)	TPH-418.1	Cadmium	Lead
B1S1	ContraCon 1996	0 to 2	5/17/1996				ND	ND
B1S2	ContraCon 1996	2 to 4	5/17/1996				ND	ND
B1S3	ContraCon 1996	5 to 7	5/17/1996	ND	ND		ND	220
B1S4	ContraCon 1996	8.5 to 10.5	5/17/1996				ND	ND
B2S1	ContraCon 1996	0 to 2	5/17/1996				ND	50
B2S2	ContraCon 1996	0 to 2	5/17/1996	1,200	5,600		3	740
B2S3	ContraCon 1996	2	5/17/1996				ND	ND
B2S4	ContraCon 1996	5 to 7	5/17/1996	ND		ND	ND	ND
B2S5	ContraCon 1996	8.5 to 10.5	5/17/1996					
B3S1	ContraCon 1996	0 to 2	5/17/1996				ND	12
B3S2	ContraCon 1996	0 to 2	5/17/1996				ND	1400
B3S3	ContraCon 1996	2 to 4	5/17/1996	ND	ND		ND	ND
B3S4	ContraCon 1996	5 to 7	5/17/1996				ND	ND
B3S5	ContraCon 1996	8.5 to 10.5	5/17/1996					
B4S1	ContraCon 1996	0 to 2	5/17/1996				ND	ND
B4S2	ContraCon 1996	0 to 2	5/17/1996	220	800		2.4	7500
B4S3	ContraCon 1996	2 to 4	5/17/1996				ND	ND
B4S4	ContraCon 1996	5 to 7	5/17/1996				ND	ND
B4S5	ContraCon 1996	8.5 to 10.5	5/17/1996	ND		ND		
B5S1	ContraCon 1996	0 to 2	5/17/1996				ND	31
B5S2	ContraCon 1996	2 to 4	5/17/1996	150	720		ND	150
B5S3	ContraCon 1996	5 to 7	5/17/1996	ND	ND		ND	16
B5S4	ContraCon 1996	8.5 to 10.5	5/17/1996				ND	ND
B5S5	ContraCon 1996	8.5 to 10.5	5/17/1996				ND	ND
B5S6	ContraCon 1996	11 to 13	5/17/1996				ND	ND
B6S1	ContraCon 1996	0 to 2	5/17/1996				ND	ND
B6S2	ContraCon 1996	2 to 4	5/17/1996				ND	ND
B6S3	ContraCon 1996	2 to 4	5/17/1996	2,800	6,500		ND	240
B6S4	ContraCon 1996	5 to 7	5/17/1996	1,800	5,100		ND	210
B6S5	ContraCon 1996	8.5 to 10.5	5/17/1996	1,900	340			
B7S1	ContraCon 1996	0 to 2	5/17/1996				ND	40
B7S2	ContraCon 1996	0 to 2	5/17/1996				ND	940
B7S3	ContraCon 1996	2 to 4	5/17/1996	ND	ND		ND	ND
B7S4	ContraCon 1996	5 to 7	5/17/1996				ND	ND
B7S5	ContraCon 1996	8.5 to 10.5	5/17/1996	ND	ND			
B8S1	ContraCon 1996	0 to 2	5/17/1996				ND	13
B8S2	ContraCon 1996	2 to 4	5/17/1996	75	210		ND	210
B8S3	ContraCon 1996	2 to 4	5/17/1996				ND	ND
B8S4	ContraCon 1996	5 to 7	5/17/1996				ND	ND
B8S5	ContraCon 1996	8.5 to 10.5	5/17/1996	ND		ND	ND	ND
B9S1	ContraCon 1996	0 to 2	5/17/1996				ND	15
B9S2	ContraCon 1996	2 to 4	5/17/1996	43	230		1	2400
B9S3	ContraCon 1996	2 to 4	5/17/1996	ND	ND		ND	ND
B9S4	ContraCon 1996	5 to 7	5/17/1996				ND	580
B10S1	ContraCon 1996	0 to 2	5/17/1996				ND	1500
B10S2	ContraCon 1996	2 to 4	5/17/1996	ND	ND		ND	780
B10S3	ContraCon 1996	2 to 4	5/17/1996				ND	ND

Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg				
				TPH-D	TPH-D (ext)	TPH-418.1	Cadmium	Lead
B10S4	ContraCon 1996	5 to 7	5/17/1996				19	1000
B10S5	ContraCon 1996	5 to 7	5/17/1996	ND	ND		ND	ND
B10S6	ContraCon 1996	8.5 to 10.5	5/17/1996					
B11S1	ContraCon 1996	0 to 2	5/17/1996				ND	49
B11S2	ContraCon 1996	2 to 4	5/17/1996				1	380
B11S3	ContraCon 1996	2 to 4	5/17/1996	21,000	ND		ND	150
B11S4	ContraCon 1996	5 to 7	5/17/1996	23,000	ND		ND	ND
B12S1	ContraCon 1996	0 to 2	5/17/1996				11	440
B12S2	ContraCon 1996	2 to 4	5/17/1996				15	3330
B12S3	ContraCon 1996	2 to 4	5/17/1996	280	1,300		ND	15
B12S4	ContraCon 1996	5 to 7	5/17/1996				4	410
B12S5	ContraCon 1996	8.5 to 10.5	5/17/1996	740		1,300	ND	ND
B13S1	ContraCon 1996	2 to 4	5/17/1996					
B13S2	ContraCon 1996	4 to 6	5/17/1996					
B13S3	ContraCon 1996	6.5 to 8	5/17/1996	ND	61			
B13S4	ContraCon 1996	9 to 10.5	5/17/1996	8,000	3,700			
B13S5	ContraCon 1996	11.5 to 13	5/17/1996					
B13S6	ContraCon 1996	14 to 15.5	5/17/1996					
B13S7	ContraCon 1996	16.5 to 18	5/17/1996					
B13S8	ContraCon 1996	19 to 20.5	5/17/1996	1,200	3,200			
B13S9	ContraCon 1996	25 to 26.5	5/17/1996	25	94			
B13S10	ContraCon 1996	25 to 26.5	5/17/1996					
B14S1	ContraCon 1996	2 to 4	5/17/1996					
B14S2	ContraCon 1996	4 to 6	5/17/1996					
B14S3	ContraCon 1996	6.5 to 8.5	5/17/1996					
B14S4	ContraCon 1996	9 to 10.5	5/17/1996	40	210			
B14S5	ContraCon 1996	11.5 to 13	5/17/1996	31	150			
B14S6	ContraCon 1996	14 to 15.5	5/17/1996					
B14S7	ContraCon 1996	16.5 to 18	5/17/1996	5,800	2,000			
B14S8	ContraCon 1996	19 to 20.5	5/17/1996					
B14S9	ContraCon 1996	25 to 26.5	5/17/1996	470	150			
B15S1	ContraCon 1996	0 to 2	5/17/1996					
B15S2	ContraCon 1996	2 to 4	5/17/1996	120	300			
B15S3	ContraCon 1996	6.5 to 8	5/17/1996					
B15S4	ContraCon 1996	9 to 10.5	5/17/1996	ND	ND			
B15S5	ContraCon 1996	11.5 to 13	5/17/1996	ND	ND			
B15S6	ContraCon 1996	14 to 15.5	5/17/1996					
B15S7	ContraCon 1996	16.5 to 18	5/17/1996	1,700	590			
B15S8	ContraCon 1996	19 to 20.5	5/17/1996					
B15S9	ContraCon 1996	25 to 26.5	5/17/1996	8,100	2,700			
B16S1	ContraCon 1996	2 to 4	5/17/1996					
B16S2	ContraCon 1996	4 to 6	5/17/1996					
B16S3	ContraCon 1996	6.5 to 8	5/17/1996					
B16S4	ContraCon 1996	9 to 10.5	5/17/1996	7,200	1,500			
B16S5	ContraCon 1996	11.5 to 13	5/17/1996					
B16S6	ContraCon 1996	14 to 15.5	5/17/1996	5,400	ND			
B16S7	ContraCon 1996	16.5 to 18	5/17/1996					

Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg				
				TPH-D	TPH-D (ext)	TPH-418.1	Cadmium	Lead
B16S8	ContraCon 1996	19 to 20.5	5/17/1996	ND	ND			
B16S9	ContraCon 1996	25 to 26.5	5/17/1996	ND	ND			
B16S10	ContraCon 1996	25 to 26.5	5/17/1996	ND	ND			
B17S1	ContraCon 1996	2.5	5/17/1996					
B17S2	ContraCon 1996	7.5	5/17/1996	ND	ND			
B17S3	ContraCon 1996	12	5/17/1996					
B17S4	ContraCon 1996	5	5/17/1996	ND	ND			
B17S5	ContraCon 1996	17.5	5/17/1996					
B17S6	ContraCon 1996	22.5	5/17/1996	ND	ND			
B17S7	ContraCon 1996	27	5/17/1996					
B18S1	ContraCon 1996	5	5/17/1996					
B18S2	ContraCon 1996	7.5	5/17/1996	ND	140			
B18S3	ContraCon 1996	2.5	5/17/1996					
B18S4	ContraCon 1996	7.5	5/17/1996	ND	ND			
B18S5	ContraCon 1996	22.5	5/17/1996					
B18S6	ContraCon 1996	27.5	5/17/1996	ND	ND			
B18S7	ContraCon 1996	32.5	5/17/1996					
B19S1	ContraCon 1996	2.5	5/17/1996					
B19S2	ContraCon 1996	7.5	5/17/1996					
B19S3	ContraCon 1996	12.5	5/17/1996	ND	ND			
B19S4	ContraCon 1996	17.5	5/17/1996					
B19S5	ContraCon 1996	22.5	5/17/1996	ND	ND			
B19S6	ContraCon 1996	27.5	5/17/1996					
B19S7	ContraCon 1996	32.5	5/17/1996	ND	ND			
B19S8	ContraCon 1996	37.5	5/17/1996					
B20S1	ContraCon 1996	2.5	5/17/1996	ND	ND		ND	10
B20S2	ContraCon 1996	7.5	5/17/1996	16,000	14,000		ND	4
B20S3	ContraCon 1996	12.5	5/17/1996	38	ND			
B20S4	ContraCon 1996	17.5	5/17/1996	60	77			
B20S5	ContraCon 1996	27.5	5/17/1996	ND	ND			
B21S1	ContraCon 1996	2.5	5/17/1996					
B21S2	ContraCon 1996	7.5	5/17/1996	ND	ND			
B21S3	ContraCon 1996	12.5	5/17/1996	ND	ND			
B21S4	ContraCon 1996	21.5	5/17/1996	ND	ND			
B21S5	ContraCon 1996		5/17/1996	ND	ND			
TPH7065.01	ContraCon 1996	10.5 to 11.5	5/17/1996	ND		ND		
TPH4017.01	ContraCon 1996	9 to 9.5	5/17/1996	ND		ND		
TPH9220.01	ContraCon 1996	12	5/17/1996	64		350		
TPH25-30.01	ContraCon 1996	9.5	5/17/1996	5,700		8,500		
TPH8505.01	ContraCon 1996	12	5/17/1996	11,000		11,000		
TPH6027.01	ContraCon 1996	0	5/17/1996	26,000		43,000		
TPH1521.01	ContraCon 1996	9	5/17/1996	ND		ND		
TPH3065.01	ContraCon 1996	12.5	5/17/1996	119		ND		
TPH5922.01	ContraCon 1996	5	5/17/1996	9.4		13		
TPH5922.06	ContraCon 1996	10	5/17/1996	12,000		12,000		
TPH5922.10	ContraCon 1996	40	5/17/1996	3,200		6,300		
TPH92-22.01	ContraCon 1996	10	5/17/1996	1,600		5,000		

Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg				
				TPH-D	TPH-D (ext)	TPH-418.1	Cadmium	Lead
TPH92-22.02	ContraCon 1996	15	5/17/1996	10		11		
TPH122-22.01	ContraCon 1996	10	5/17/1996	5.8		12		
TPH5922.BULK2	ContraCon 1996	15	5/17/1996	6,000		7,300		
M35-05.M01	ContraCon 1996		5/17/1996				ND	5
M35-05.M02	ContraCon 1996		5/17/1996				ND	3
M1504.M03	ContraCon 1996		5/17/1996				ND	100
M1504.M04	ContraCon 1996		5/17/1996				ND	3
M5005.M05	ContraCon 1996		5/17/1996				ND	28
M5005.M06	ContraCon 1996		5/17/1996				ND	5
M7020.M07	ContraCon 1996		5/17/1996				ND	8
M7020.M08	ContraCon 1996		5/17/1996				ND	4
TR6717.01	ContraCon 1996		5/17/1996				ND	7
TR6717.04	ContraCon 1996		5/17/1996				ND	115

ND = Not detected above practical quantitation limit.

Table 1 - Historical Analytical Results for Soil Samples

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg		
				Diesel	Oil	Mineral Oil
B22	Geotech 2006	3 to 4	8/18/2006	ND	ND	ND
B24	Geotech 2006	10 to 11	8/18/2006	ND	ND	ND
B24	Geotech 2006	13 to 14	8/18/2006	ND	ND	ND
B25	Geotech 2006	11 to 12	8/18/2006	ND	ND	ND
B26	Geotech 2006	1.5 to 2	8/18/2006	ND	390	ND
B26	Geotech 2006	10 to 11	8/18/2006	ND	120	ND

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg			
				Lead	Cadmium	Chromium	Arsenic
B22	Geotech 2006	3 to 4	8/18/2006	10	ND	ND	ND
B24	Geotech 2006	10 to 11	8/18/2006	6.6	ND	31	ND
B24	Geotech 2006	13 to 14	8/18/2006	ND	ND	40	ND
B25	Geotech 2006	11 to 12	8/18/2006	ND	ND	24	ND
B26	Geotech 2006	1.5 to 2	8/18/2006	18	ND	93	ND
B26	Geotech 2006	10 to 11	8/18/2006	220	ND	12	ND

Sample ID	Reference	Depth Interval in Feet	Sampling Date	Concentration in mg/kg			
				Silver	Barium	Selenium	Mercury
B22	Geotech 2006	3 to 4	8/18/2006	ND	ND	ND	ND
B24	Geotech 2006	10 to 11	8/18/2006	ND	ND	ND	ND
B24	Geotech 2006	13 to 14	8/18/2006	ND	ND	ND	ND
B25	Geotech 2006	11 to 12	8/18/2006	ND	ND	ND	ND
B26	Geotech 2006	1.5 to 2	8/18/2006	ND	ND	ND	ND
B26	Geotech 2006	10 to 11	8/18/2006	ND	ND	ND	ND

ND = Not detected above practical quantitation limit.

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-1-S1	HCE-1-S2	HCE-1-S3	HCE-2-S1
Sampling Date	Method A	10/29/2012	10/29/2012	10/29/2012	11/12/2012
Sample Depth in Feet	Screening Level	1.0	7.0	12.3	2.5 to 4.0
Moisture in %		6.0	7.5	6.8	9.8
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		20 U
Heavy oil	2000	50 U	50 U		50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*		5.0 U		
Gasoline	100/30*		5.0 U		
Metals in mg/kg					
Lead	250	7.3	1.0 U		1.0
Chromium	19/2000**	4.3	3.1		2.0 U
Cadmium	2	1.0 U	1.0 U		1.0 U
Arsenic	20	2.0 U	2.0 U		2.0 U
Mercury	2	0.5 UJ	0.5 UJ		0.5 UJ
Copper		5.4	2.8		12
Nickel		1.7	1.1		5.0
Zinc		15 J	7.4 J		48
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100		100 U	100 U	100 U
Dichlorodifluoromethane			50 U	50 U	50 U
Chloromethane			50 U	50 U	50 U
Vinyl chloride			50 U	50 U	50 U
Bromomethane			50 U	50 U	50 U
Chloroethane			50 U	50 U	50 U
Trichlorofluoromethane			50 U	50 U	50 U
1,1-Dichloroethene			50 U	50 U	50 U
Methylene chloride	20		20 U	20 U	20 U
trans-1,2-Dichloroethene			50 U	50 U	50 U
1,1-Dichloroethane			50 U	50 U	50 U
2,2-Dichloropropane			50 U	50 U	50 U
cis-1,2-Dichloroethene			50 U	50 U	50 U
Chloroform			50 U	50 U	50 U
1,1,1-Trichloroethane	2000		50 U	50 U	50 U
Carbon tetrachloride			50 U	50 U	50 U
1,1-Dichloropropene			50 U	50 U	50 U
Benzene	30		20 U	20 U	20 U
1,2-Dichloroethane (EDC)			20 U	20 U	20 U
Trichloroethene	30		20 U	20 U	20 U
1,2-Dichloropropane			50 U	50 U	50 U
Dibromomethane			50 U	50 U	50 U
Bromodichloromethane			50 U	50 U	50 U
cis-1,3-Dichloropropene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-1-S1	HCE-1-S2	HCE-1-S3	HCE-2-S1
Sampling Date	Method A	10/29/2012	10/29/2012	10/29/2012	11/12/2012
Sample Depth in Feet	Screening	1.0	7.0	12.3	2.5 to 4.0
Toluene	7000		50 U	50 U	50 U
trans-1,3-Dichloropropene			50 U	50 U	50 U
1,1,2-Trichloroethane			50 U	50 U	50 U
Tetrachloroethene			50 U	50 U	50 U
1,3-Dichloropropane			50 U	50 U	50 U
Dibromochloromethane			20 U	20 U	20 U
1,2-Dibromoethane (EDB)	5		5 U	5 U	5 U
Chlorobenzene			50 U	50 U	50 U
1,1,1,2-Tetrachloroethane			50 U	50 U	50 U
Ethylbenzene	6000		50 U	50 U	50 U
Xylenes	9000		50 U	50 U	50 U
Styrene			50 U	50 U	50 U
Bromoform			50 U	50 U	50 U
Isopropylbenzene			50 U	50 U	50 U
1,2,3-Trichloropropane			50 U	50 U	50 U
Bromobenzene			50 U	50 U	50 U
1,1,2,2-Tetrachloroethane			50 U	50 U	50 U
n-Propylbenzene			50 U	50 U	50 U
2-Chlorotoluene			50 U	50 U	50 U
4-Chlorotoluene			50 U	50 U	50 U
1,3,5-Trimethylbenzene			50 U	50 U	50 U
tert-Butylbenzene			50 U	50 U	50 U
1,2,4-Trimethylbenzene			50 U	50 U	50 U
sec-Butylbenzene			50 U	50 U	50 U
1,3-Dichlorobenzene			50 U	50 U	50 U
Isopropyltoluene			50 U	50 U	50 U
1,4-Dichlorobenzene			50 U	50 U	50 U
1,2-Dichlorobenzene			50 U	50 U	50 U
n-Butylbenzene			50 U	50 U	50 U
1,2-Dibromo-3-Chloropropane			50 U	50 U	50 U
1,2,4-Trichlorobenzene			50 U	50 U	50 U
Hexachloro-1,3-butadiene			50 U	50 U	50 U
Naphthalene	5000		50 U	50 U	50 U
1,2,3-Trichlorobenzene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-2-S2	HCE-2-S3	HCE-2-S5	HCE-2-S7
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	7.5 to 9.0	12.5 to 14.0	22.5 to 23.9	32.5 to 35.5
Moisture in %		9.1	9.7	9.8	11
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000		20 U	20 U	20 U
Diesel/Fuel oil	2000		20 U	20 U	20 U
Heavy oil	2000		50 U	50 U	50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				5.0 U
Gasoline	100/30*				5.0 U
Metals in mg/kg					
Lead	250	1.0 U			
Chromium	19/2000**	2.0 U			
Cadmium	2	1.0 U			
Arsenic	20	2.0 U			
Mercury	2	0.5 UJ			
Copper		5.4			
Nickel		4.1			
Zinc		23			
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100		100 U	100 U	100 U
Dichlorodifluoromethane			50 U	50 U	50 U
Chloromethane			50 U	50 U	50 U
Vinyl chloride			50 U	50 U	50 U
Bromomethane			50 U	50 U	50 U
Chloroethane			50 U	50 U	50 U
Trichlorofluoromethane			50 U	50 U	50 U
1,1-Dichloroethene			50 U	50 U	50 U
Methylene chloride	20		20 U	20 U	20 U
trans-1,2-Dichloroethene			50 U	50 U	50 U
1,1-Dichloroethane			50 U	50 U	50 U
2,2-Dichloropropane			50 U	50 U	50 U
cis-1,2-Dichloroethene			50 U	50 U	50 U
Chloroform			50 U	50 U	50 U
1,1,1-Trichloroethane	2000		50 U	50 U	50 U
Carbon tetrachloride			50 U	50 U	50 U
1,1-Dichloropropene			50 U	50 U	50 U
Benzene	30		20 U	20 U	20 U
1,2-Dichloroethane (EDC)			20 U	20 U	20 U
Trichloroethene	30		20 U	20 U	20 U
1,2-Dichloropropane			50 U	50 U	50 U
Dibromomethane			50 U	50 U	50 U
Bromodichloromethane			50 U	50 U	50 U
cis-1,3-Dichloropropene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-2-S2	HCE-2-S3	HCE-2-S5	HCE-2-S7
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	7.5 to 9.0	12.5 to 14.0	22.5 to 23.9	32.5 to 35.5
Toluene	7000		50 U	50 U	50 U
trans-1,3-Dichloropropene			50 U	50 U	50 U
1,1,2-Trichloroethane			50 U	50 U	50 U
Tetrachloroethene			50 U	50 U	50 U
1,3-Dichloropropane			50 U	50 U	50 U
Dibromochloromethane			20 U	20 U	20 U
1,2-Dibromoethane (EDB)	5		5 U	5 U	5 U
Chlorobenzene			50 U	50 U	50 U
1,1,1,2-Tetrachloroethane			50 U	50 U	50 U
Ethylbenzene	6000		50 U	50 U	50 U
Xylenes	9000		50 U	50 U	50 U
Styrene			50 U	50 U	50 U
Bromoform			50 U	50 U	50 U
Isopropylbenzene			50 U	50 U	50 U
1,2,3-Trichloropropane			50 U	50 U	50 U
Bromobenzene			50 U	50 U	50 U
1,1,2,2-Tetrachloroethane			50 U	50 U	50 U
n-Propylbenzene			50 U	50 U	50 U
2-Chlorotoluene			50 U	50 U	50 U
4-Chlorotoluene			50 U	50 U	50 U
1,3,5-Trimethylbenzene			50 U	50 U	50 U
tert-Butylbenzene			50 U	50 U	50 U
1,2,4-Trimethylbenzene			50 U	50 U	50 U
sec-Butylbenzene			50 U	50 U	50 U
1,3-Dichlorobenzene			50 U	50 U	50 U
Isopropyltoluene			50 U	50 U	50 U
1,4-Dichlorobenzene			50 U	50 U	50 U
1,2-Dichlorobenzene			50 U	50 U	50 U
n-Butylbenzene			50 U	50 U	50 U
1,2-Dibromo-3-Chloropropane			50 U	50 U	50 U
1,2,4-Trichlorobenzene			50 U	50 U	50 U
Hexachloro-1,3-butadiene			50 U	50 U	50 U
Naphthalene	5000		50 U	50 U	50 U
1,2,3-Trichlorobenzene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-2-S8	HCE-3-S1	HCE-3-S2	HCE-3-S3
Sampling Date	Method A	11/12/2012	10/30/2012	10/30/2012	10/30/2012
Sample Depth in Feet	Screening Level	37.5 to 39.0	1.6	7.0	12.1
Moisture in %		12	6.6	6.8	6.4
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	
Diesel/Fuel oil	2000	20 U	20 U	20 U	
Heavy oil	2000	50 U	50 U	50 U	
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U		5.0 U	
Gasoline	100/30*	5.0 U		5.0 U	
Metals in mg/kg					
Lead	250		1.0 U	1.0 U	
Chromium	19/2000**		2.0 U	2.0 U	
Cadmium	2		1.0 U	1.0 U	
Arsenic	20		2.0 U	2.0 U	
Mercury	2		0.5 UJ	0.5 UJ	
Copper			2.0 U	2.0 U	
Nickel			1.0 U	1.0 U	
Zinc			4.0 J	1.5 J	
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100	100 U		100 U	100 U
Dichlorodifluoromethane		50 U		50 U	50 U
Chloromethane		50 U		50 U	50 U
Vinyl chloride		50 U		50 U	50 U
Bromomethane		50 U		50 U	50 U
Chloroethane		50 U		50 U	50 U
Trichlorofluoromethane		50 U		50 U	50 U
1,1-Dichloroethene		50 U		50 U	50 U
Methylene chloride	20	20 U		20 U	20 U
trans-1,2-Dichloroethene		50 U		50 U	50 U
1,1-Dichloroethane		50 U		50 U	50 U
2,2-Dichloropropane		50 U		50 U	50 U
cis-1,2-Dichloroethene		50 U		50 U	50 U
Chloroform		50 U		50 U	50 U
1,1,1-Trichloroethane	2000	50 U		50 U	50 U
Carbon tetrachloride		50 U		50 U	50 U
1,1-Dichloropropene		50 U		50 U	50 U
Benzene	30	20 U		20 U	20 U
1,2-Dichloroethane (EDC)		20 U		20 U	20 U
Trichloroethene	30	20 U		20 U	20 U
1,2-Dichloropropane		50 U		50 U	50 U
Dibromomethane		50 U		50 U	50 U
Bromodichloromethane		50 U		50 U	50 U
cis-1,3-Dichloropropene		50 U		50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-2-S8	HCE-3-S1	HCE-3-S2	HCE-3-S3
Sampling Date	Method A	11/12/2012	10/30/2012	10/30/2012	10/30/2012
Sample Depth in Feet	Screening	37.5 to 39.0	1.6	7.0	12.1
Toluene	7000	50 U		50 U	50 U
trans-1,3-Dichloropropene		50 U		50 U	50 U
1,1,2-Trichloroethane		50 U		50 U	50 U
Tetrachloroethene		50 U		50 U	50 U
1,3-Dichloropropane		50 U		50 U	50 U
Dibromochloromethane		20 U		20 U	20 U
1,2-Dibromoethane (EDB)	5	5 U		5 U	5 U
Chlorobenzene		50 U		50 U	50 U
1,1,1,2-Tetrachloroethane		50 U		50 U	50 U
Ethylbenzene	6000	50 U		50 U	50 U
Xylenes	9000	50 U		50 U	50 U
Styrene		50 U		50 U	50 U
Bromoform		50 U		50 U	50 U
Isopropylbenzene		50 U		50 U	50 U
1,2,3-Trichloropropane		50 U		50 U	50 U
Bromobenzene		50 U		50 U	50 U
1,1,2,2-Tetrachloroethane		50 U		50 U	50 U
n-Propylbenzene		50 U		50 U	50 U
2-Chlorotoluene		50 U		50 U	50 U
4-Chlorotoluene		50 U		50 U	50 U
1,3,5-Trimethylbenzene		50 U		50 U	50 U
tert-Butylbenzene		50 U		50 U	50 U
1,2,4-Trimethylbenzene		50 U		50 U	50 U
sec-Butylbenzene		50 U		50 U	50 U
1,3-Dichlorobenzene		50 U		50 U	50 U
Isopropyltoluene		50 U		50 U	50 U
1,4-Dichlorobenzene		50 U		50 U	50 U
1,2-Dichlorobenzene		50 U		50 U	50 U
n-Butylbenzene		50 U		50 U	50 U
1,2-Dibromo-3-Chloropropane		50 U		50 U	50 U
1,2,4-Trichlorobenzene		50 U		50 U	50 U
Hexachloro-1,3-butadiene		50 U		50 U	50 U
Naphthalene	5000	50 U		50 U	50 U
1,2,3-Trichlorobenzene		50 U		50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-4-S1	HCE-4-S3	HCE-5-S1	HCE-5-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/13/2012	11/13/2012
Sample Depth in Feet	Screening Level	1.5	12.5	2.5 to 4.0	7.5 to 9.0
Moisture in %		8.9	8.1	10	9.3
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000	20 U	20 U	20 U	20 U
Heavy oil	2000	50 U	50 U	50 U	50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U	5.0 U	5.0 U	5.0 U
Gasoline	100/30*	5.0 U	5.0 U	5.0 U	5.0 U
Metals in mg/kg					
Lead	250	4.2		1.0 U	1.0 U
Chromium	19/2000**	2.0 U		2.0 U	2.0 U
Cadmium	2	1.0 U		1.0 U	1.0 U
Arsenic	20	2.0 U		2.0 U	2.0 U
Mercury	2	0.5 UJ		0.5 UJ	0.5 UJ
Copper		2.0 U		13	4.5
Nickel		1.0 U		9.7	1.0 U
Zinc		4.5 J		36	20
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100	100 U	100 U	100 U	
Dichlorodifluoromethane		50 U	50 U	50 U	
Chloromethane		50 U	50 U	50 U	
Vinyl chloride		50 U	50 U	50 U	
Bromomethane		50 U	50 U	50 U	
Chloroethane		50 U	50 U	50 U	
Trichlorofluoromethane		50 U	50 U	50 U	
1,1-Dichloroethene		50 U	50 U	50 U	
Methylene chloride	20	20 U	20 U	20 U	
trans-1,2-Dichloroethene		50 U	50 U	50 U	
1,1-Dichloroethane		50 U	50 U	50 U	
2,2-Dichloropropane		50 U	50 U	50 U	
cis-1,2-Dichloroethene		50 U	50 U	50 U	
Chloroform		50 U	50 U	50 U	
1,1,1-Trichloroethane	2000	50 U	50 U	50 U	
Carbon tetrachloride		50 U	50 U	50 U	
1,1-Dichloropropene		50 U	50 U	50 U	
Benzene	30	20 U	20 U	20 U	
1,2-Dichloroethane (EDC)		20 U	20 U	20 U	
Trichloroethene	30	20 U	20 U	20 U	
1,2-Dichloropropane		50 U	50 U	50 U	
Dibromomethane		50 U	50 U	50 U	
Bromodichloromethane		50 U	50 U	50 U	
cis-1,3-Dichloropropene		50 U	50 U	50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-4-S1	HCE-4-S3	HCE-5-S1	HCE-5-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/13/2012	11/13/2012
Sample Depth in Feet	Screening	1.5	12.5	2.5 to 4.0	7.5 to 9.0
Toluene	7000	50 U	50 U	50 U	
trans-1,3-Dichloropropene		50 U	50 U	50 U	
1,1,2-Trichloroethane		50 U	50 U	50 U	
Tetrachloroethene		50 U	50 U	50 U	
1,3-Dichloropropane		50 U	50 U	50 U	
Dibromochloromethane		20 U	20 U	20 U	
1,2-Dibromoethane (EDB)	5	5 U	5 U	5 U	
Chlorobenzene		50 U	50 U	50 U	
1,1,1,2-Tetrachloroethane		50 U	50 U	50 U	
Ethylbenzene	6000	50 U	50 U	50 U	
Xylenes	9000	50 U	50 U	50 U	
Styrene		50 U	50 U	50 U	
Bromoform		50 U	50 U	50 U	
Isopropylbenzene		50 U	50 U	50 U	
1,2,3-Trichloropropane		50 U	50 U	50 U	
Bromobenzene		50 U	50 U	50 U	
1,1,2,2-Tetrachloroethane		50 U	50 U	50 U	
n-Propylbenzene		50 U	50 U	50 U	
2-Chlorotoluene		50 U	50 U	50 U	
4-Chlorotoluene		50 U	50 U	50 U	
1,3,5-Trimethylbenzene		50 U	50 U	50 U	
tert-Butylbenzene		50 U	50 U	50 U	
1,2,4-Trimethylbenzene		50 U	50 U	50 U	
sec-Butylbenzene		50 U	50 U	50 U	
1,3-Dichlorobenzene		50 U	50 U	50 U	
Isopropyltoluene		50 U	50 U	50 U	
1,4-Dichlorobenzene		50 U	50 U	50 U	
1,2-Dichlorobenzene		50 U	50 U	50 U	
n-Butylbenzene		50 U	50 U	50 U	
1,2-Dibromo-3-Chloropropane		50 U	50 U	50 U	
1,2,4-Trichlorobenzene		50 U	50 U	50 U	
Hexachloro-1,3-butadiene		50 U	50 U	50 U	
Naphthalene	5000	50 U	50 U	50 U	
1,2,3-Trichlorobenzene		50 U	50 U	50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-5-S3	HCE-5-S4	HCE-5-S7	HCE-6-S1
Sampling Date	Method A	11/13/2012	11/13/2012	11/13/2012	10/29/2012
Sample Depth in Feet	Screening Level	12.5 to 14.0	17.5 to 18.4	32.5 to 34.0	1.5
Moisture in %		9.7	10	9.8	9.3
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		20 U
Heavy oil	2000	50 U	50 U		50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				5.0 U
Gasoline	100/30*				5.0 U
Metals in mg/kg					
Lead	250	1.0 U	1.0 U		1.0 U
Chromium	19/2000**	2.0 U	2.0 U		2.0 U
Cadmium	2	1.0 U	1.0 U		1.0 U
Arsenic	20	2.0 U	2.0 U		2.0 U
Mercury	2	0.5 UJ	0.5 UJ		0.5 UJ
Copper		3.1	3.9		2.0 U
Nickel		1.0 U	5.9		1.0 U
Zinc		14	17		3.9 J
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100			100 U	100 U
Dichlorodifluoromethane				50 U	50 U
Chloromethane				50 U	50 U
Vinyl chloride				50 U	50 U
Bromomethane				50 U	50 U
Chloroethane				50 U	50 U
Trichlorofluoromethane				50 U	50 U
1,1-Dichloroethene				50 U	50 U
Methylene chloride	20			20 U	20 U
trans-1,2-Dichloroethene				50 U	50 U
1,1-Dichloroethane				50 U	50 U
2,2-Dichloropropane				50 U	50 U
cis-1,2-Dichloroethene				50 U	50 U
Chloroform				50 U	50 U
1,1,1-Trichloroethane	2000			50 U	50 U
Carbon tetrachloride				50 U	50 U
1,1-Dichloropropene				50 U	50 U
Benzene	30			20 U	20 U
1,2-Dichloroethane (EDC)				20 U	20 U
Trichloroethene	30			20 U	20 U
1,2-Dichloropropane				50 U	50 U
Dibromomethane				50 U	50 U
Bromodichloromethane				50 U	50 U
cis-1,3-Dichloropropene				50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-5-S3	HCE-5-S4	HCE-5-S7	HCE-6-S1
Sampling Date	Method A	11/13/2012	11/13/2012	11/13/2012	10/29/2012
Sample Depth in Feet	Screening	12.5 to 14.0	17.5 to 18.4	32.5 to 34.0	1.5
Toluene	7000			50 U	50 U
trans-1,3-Dichloropropene				50 U	50 U
1,1,2-Trichloroethane				50 U	50 U
Tetrachloroethene				50 U	50 U
1,3-Dichloropropane				50 U	50 U
Dibromochloromethane				20 U	20 U
1,2-Dibromoethane (EDB)	5			5 U	5 U
Chlorobenzene				50 U	50 U
1,1,1,2-Tetrachloroethane				50 U	50 U
Ethylbenzene	6000			50 U	50 U
Xylenes	9000			50 U	50 U
Styrene				50 U	50 U
Bromoform				50 U	50 U
Isopropylbenzene				50 U	50 U
1,2,3-Trichloropropane				50 U	50 U
Bromobenzene				50 U	50 U
1,1,2,2-Tetrachloroethane				50 U	50 U
n-Propylbenzene				50 U	50 U
2-Chlorotoluene				50 U	50 U
4-Chlorotoluene				50 U	50 U
1,3,5-Trimethylbenzene				50 U	50 U
tert-Butylbenzene				50 U	50 U
1,2,4-Trimethylbenzene				50 U	50 U
sec-Butylbenzene				50 U	50 U
1,3-Dichlorobenzene				50 U	50 U
Isopropyltoluene				50 U	50 U
1,4-Dichlorobenzene				50 U	50 U
1,2-Dichlorobenzene				50 U	50 U
n-Butylbenzene				50 U	50 U
1,2-Dibromo-3-Chloropropane				50 U	50 U
1,2,4-Trichlorobenzene				50 U	50 U
Hexachloro-1,3-butadiene				50 U	50 U
Naphthalene	5000			50 U	50 U
1,2,3-Trichlorobenzene				50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-6-S2	HCE-6-S3	HCE-7-S1	HCE-7-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	7.0	12.0	2.5 to 4.0	5.0 to 6.5
Moisture in %		9.7	10		12
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		4400
Heavy oil	2000	5400	97		50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U			5.0 U
Gasoline	100/30*	5.0 U			140
Metals in mg/kg					
Lead	250				
Chromium	19/2000**				
Cadmium	2				
Arsenic	20				
Mercury	2				
Copper					
Nickel					
Zinc					
TCLP Metals in mg/L					
Lead	5			0.30	0.015
Cadmium	1			0.005 U	0.005 U
Zinc				0.45 J	0.10 J
Volatiles in µg/kg					
MTBE	100	100 U			100 U
Dichlorodifluoromethane		50 U			50 U
Chloromethane		50 U			50 U
Vinyl chloride		50 U			50 U
Bromomethane		50 U			50 U
Chloroethane		50 U			50 U
Trichlorofluoromethane		50 U			50 U
1,1-Dichloroethene		50 U			50 U
Methylene chloride	20	20 U			20 U
trans-1,2-Dichloroethene		50 U			50 U
1,1-Dichloroethane		50 U			50 U
2,2-Dichloropropane		50 U			50 U
cis-1,2-Dichloroethene		50 U			50 U
Chloroform		50 U			50 U
1,1,1-Trichloroethane	2000	50 U			50 U
Carbon tetrachloride		50 U			50 U
1,1-Dichloropropene		50 U			50 U
Benzene	30	20 U			20 U
1,2-Dichloroethane (EDC)		20 U			20 U
Trichloroethene	30	20 U			20 U
1,2-Dichloropropane		50 U			50 U
Dibromomethane		50 U			50 U
Bromodichloromethane		50 U			50 U
cis-1,3-Dichloropropene		50 U			50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-6-S2	HCE-6-S3	HCE-7-S1	HCE-7-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	7.0	12.0	2.5 to 4.0	5.0 to 6.5
Toluene	7000	50 U			50 U
trans-1,3-Dichloropropene		50 U			50 U
1,1,2-Trichloroethane		50 U			50 U
Tetrachloroethene		50 U			50 U
1,3-Dichloropropane		50 U			50 U
Dibromochloromethane		20 U			20 U
1,2-Dibromoethane (EDB)	5	5 U			5 U
Chlorobenzene		50 U			50 U
1,1,1,2-Tetrachloroethane		50 U			50 U
Ethylbenzene	6000	50 U			180
Xylenes	9000	50 U			320
Styrene		50 U			50 U
Bromoform		50 U			50 U
Isopropylbenzene		50 U			180
1,2,3-Trichloropropane		50 U			50 U
Bromobenzene		50 U			50 U
1,1,2,2-Tetrachloroethane		50 U			50 U
n-Propylbenzene		50 U			500
2-Chlorotoluene		50 U			85
4-Chlorotoluene		50 U			50 U
1,3,5-Trimethylbenzene		50 U			830
tert-Butylbenzene		50 U			1000
1,2,4-Trimethylbenzene		50 U			6700
sec-Butylbenzene		50 U			4800
1,3-Dichlorobenzene		50 U			50 U
Isopropyltoluene		50 U			600
1,4-Dichlorobenzene		50 U			50 U
1,2-Dichlorobenzene		50 U			50 U
n-Butylbenzene		50 U			610
1,2-Dibromo-3-Chloropropane		50 U			50 U
1,2,4-Trichlorobenzene		50 U			50 U
Hexachloro-1,3-butadiene		50 U			50 U
Naphthalene	5000	50 U			50 U
1,2,3-Trichlorobenzene		50 U			50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-7-S3	HCE-7-S4	HCE-7-S5	HCE-7-S6
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	10.0 to 11.5	15.0 to 16.5	20.0 to 21.5	25.0 to 26.5
Moisture in %		13	11	10	9.6
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000	5500	960	3400	32
Heavy oil	2000	50 U	350	1200	50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U	5.0 U	5.0 U	5.0 U
Gasoline	100/30*	410	220	64	5.0 U
Metals in mg/kg					
Lead	250	1.3	1.0	1.1	
Chromium	19/2000**	2.0 U	2.0 U	2.0 U	
Cadmium	2	1.0 U	1.0 U	1.0 U	
Arsenic	20	2.0 U	2.0 U	2.0 U	
Mercury	2	0.5 UJ	0.5 UJ	0.5 UJ	
Copper		15	8	12	
Nickel		38	5.2	23	
Zinc		60	32	46	
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100	100 U	100 U	100 U	100 U
Dichlorodifluoromethane		50 U	50 U	50 U	50 U
Chloromethane		50 U	50 U	50 U	50 U
Vinyl chloride		50 U	50 U	50 U	50 U
Bromomethane		50 U	50 U	50 U	50 U
Chloroethane		50 U	50 U	50 U	50 U
Trichlorofluoromethane		50 U	50 U	50 U	50 U
1,1-Dichloroethene		50 U	50 U	50 U	50 U
Methylene chloride	20	20 U	20 U	20 U	20 U
trans-1,2-Dichloroethene		50 U	50 U	50 U	50 U
1,1-Dichloroethane		50 U	50 U	50 U	50 U
2,2-Dichloropropane		50 U	50 U	50 U	50 U
cis-1,2-Dichloroethene		50 U	50 U	50 U	50 U
Chloroform		50 U	50 U	50 U	50 U
1,1,1-Trichloroethane	2000	50 U	50 U	50 U	50 U
Carbon tetrachloride		50 U	50 U	50 U	50 U
1,1-Dichloropropene		50 U	50 U	50 U	50 U
Benzene	30	20 U	20 U	20 U	20 U
1,2-Dichloroethane (EDC)		20 U	20 U	20 U	20 U
Trichloroethene	30	20 U	20 U	20 U	20 U
1,2-Dichloropropane		50 U	50 U	50 U	50 U
Dibromomethane		50 U	50 U	50 U	50 U
Bromodichloromethane		50 U	50 U	50 U	50 U
cis-1,3-Dichloropropene		50 U	50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-7-S3	HCE-7-S4	HCE-7-S5	HCE-7-S6
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	10.0 to 11.5	15.0 to 16.5	20.0 to 21.5	25.0 to 26.5
Toluene	7000	50 U	50 U	50 U	50 U
trans-1,3-Dichloropropene		50 U	50 U	50 U	50 U
1,1,2-Trichloroethane		50 U	50 U	50 U	50 U
Tetrachloroethene		50 U	50 U	50 U	50 U
1,3-Dichloropropane		50 U	50 U	50 U	50 U
Dibromochloromethane		20 U	20 U	20 U	20 U
1,2-Dibromoethane (EDB)	5	5 U	5 U	5 U	5 U
Chlorobenzene		50 U	50 U	50 U	50 U
1,1,1,2-Tetrachloroethane		50 U	50 U	50 U	50 U
Ethylbenzene	6000	1100	800	140	50 U
Xylenes	9000	2500	2500	420	50 U
Styrene		50 U	50 U	50 U	50 U
Bromoform		50 U	50 U	50 U	50 U
Isopropylbenzene		1100	200	140	50 U
1,2,3-Trichloropropane		50 U	50 U	50 U	50 U
Bromobenzene		50 U	50 U	50 U	50 U
1,1,2,2-Tetrachloroethane		50 U	50 U	50 U	50 U
n-Propylbenzene		2300	1300	200	50 U
2-Chlorotoluene		86	160	50 U	50 U
4-Chlorotoluene		50 U	50 U	50 U	50 U
1,3,5-Trimethylbenzene		4700	2000	320	50 U
tert-Butylbenzene		140	67	50 U	50 U
1,2,4-Trimethylbenzene		29000	10000	1500	50 U
sec-Butylbenzene		1700	1000	170	50 U
1,3-Dichlorobenzene		50 U	50 U	50 U	50 U
Isopropyltoluene		2100	1400	220	50 U
1,4-Dichlorobenzene		50 U	50 U	50 U	50 U
1,2-Dichlorobenzene		50 U	50 U	50 U	50 U
n-Butylbenzene		2100	1900	280	50 U
1,2-Dibromo-3-Chloropropane		50 U	50 U	50 U	50 U
1,2,4-Trichlorobenzene		50 U	50 U	50 U	50 U
Hexachloro-1,3-butadiene		50 U	50 U	50 U	50 U
Naphthalene	5000	50 U	50 U	50 U	50 U
1,2,3-Trichlorobenzene		50 U	50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-7-S8	HCE-7-S9	HCE-7-S10	HCE-8-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening Level	35.0 to 36.5	40.0 to 41.5	45.0 to 46.5	1.2
Moisture in %		11	13	13	
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	
Diesel/Fuel oil	2000	20 U	20 U	20 U	
Heavy oil	2000	50 U	50 U	50 U	
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250				
Chromium	19/2000**				
Cadmium	2				
Arsenic	20				
Mercury	2				
Copper					
Nickel					
Zinc					
TCLP Metals in mg/L					
Lead	5				0.005
Cadmium	1				0.005 U
Zinc					0.05 J
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-7-S8	HCE-7-S9	HCE-7-S10	HCE-8-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening	35.0 to 36.5	40.0 to 41.5	45.0 to 46.5	1.2
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-8-S2	HCE-8-S3	HCE-9-S1	HCE-9-S2
Sampling Date	Method A	10/30/2012	10/30/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	6.8	11.7	5.0 to 6.5	10.0 to 11.5
Moisture in %			12		
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000		20 U		
Diesel/Fuel oil	2000		20 U		
Heavy oil	2000		50 U		
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*		5.0 U		
Gasoline	100/30*		5.0 U		
Metals in mg/kg					
Lead	250		1.0 U		
Chromium	19/2000**		2.0 U		
Cadmium	2		1.0 U		
Arsenic	20		2.0 U		
Mercury	2		0.5 UJ		
Copper			2.0 U		
Nickel			1.0 U		
Zinc			4.0 J		
TCLP Metals in mg/L					
Lead	5	0.005		0.002 U	0.002 U
Cadmium	1	0.005 U		0.005 U	0.005 U
Zinc		0.01 J		0.02 J	0.01 UJ
Volatiles in µg/kg					
MTBE	100		100 U		
Dichlorodifluoromethane			50 U		
Chloromethane			50 U		
Vinyl chloride			50 U		
Bromomethane			50 U		
Chloroethane			50 U		
Trichlorofluoromethane			50 U		
1,1-Dichloroethene			50 U		
Methylene chloride	20		20 U		
trans-1,2-Dichloroethene			50 U		
1,1-Dichloroethane			50 U		
2,2-Dichloropropane			50 U		
cis-1,2-Dichloroethene			50 U		
Chloroform			50 U		
1,1,1-Trichloroethane	2000		50 U		
Carbon tetrachloride			50 U		
1,1-Dichloropropene			50 U		
Benzene	30		20 U		
1,2-Dichloroethane (EDC)			20 U		
Trichloroethene	30		20 U		
1,2-Dichloropropane			50 U		
Dibromomethane			50 U		
Bromodichloromethane			50 U		
cis-1,3-Dichloropropene			50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-8-S2	HCE-8-S3	HCE-9-S1	HCE-9-S2
Sampling Date	Method A	10/30/2012	10/30/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	6.8	11.7	5.0 to 6.5	10.0 to 11.5
Toluene	7000		50 U		
trans-1,3-Dichloropropene			50 U		
1,1,2-Trichloroethane			50 U		
Tetrachloroethene			50 U		
1,3-Dichloropropane			50 U		
Dibromochloromethane			20 U		
1,2-Dibromoethane (EDB)	5		5 U		
Chlorobenzene			50 U		
1,1,1,2-Tetrachloroethane			50 U		
Ethylbenzene	6000		50 U		
Xylenes	9000		50 U		
Styrene			50 U		
Bromoform			50 U		
Isopropylbenzene			50 U		
1,2,3-Trichloropropane			50 U		
Bromobenzene			50 U		
1,1,2,2-Tetrachloroethane			50 U		
n-Propylbenzene			50 U		
2-Chlorotoluene			50 U		
4-Chlorotoluene			50 U		
1,3,5-Trimethylbenzene			50 U		
tert-Butylbenzene			50 U		
1,2,4-Trimethylbenzene			50 U		
sec-Butylbenzene			50 U		
1,3-Dichlorobenzene			50 U		
Isopropyltoluene			50 U		
1,4-Dichlorobenzene			50 U		
1,2-Dichlorobenzene			50 U		
n-Butylbenzene			50 U		
1,2-Dibromo-3-Chloropropane			50 U		
1,2,4-Trichlorobenzene			50 U		
Hexachloro-1,3-butadiene			50 U		
Naphthalene	5000		50 U		
1,2,3-Trichlorobenzene			50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-9-S3	HCE-9-S4	HCE-9-S5	HCE-10-S2
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening Level	15.0 to 16.5	20.0 to 21.5	25.0 to 26.5	2.4
Moisture in %		9.3	10	12	
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000				
Diesel/Fuel oil	2000				
Heavy oil	2000				
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250	1.0 U	1.0 U	1.0 U	
Chromium	19/2000**	2.0 U	2.0 U	2.0 U	
Cadmium	2	1.0 U	1.0 U	1.0 U	
Arsenic	20	2.0 U	2.0 U	2.0 U	
Mercury	2	0.5 UJ	0.5 UJ	0.5 UJ	
Copper		3.9	3.7	3.5	
Nickel		3.9	7	3.9	
Zinc		17	16	13	
TCLP Metals in mg/L					
Lead	5				0.007
Cadmium	1				0.005 U
Zinc					0.33 J
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-9-S3	HCE-9-S4	HCE-9-S5	HCE-10-S2
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening	15.0 to 16.5	20.0 to 21.5	25.0 to 26.5	2.4
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-10-S4	HCE-10-S7	HCE-11-S2	HCE-11-S7
Sampling Date	Method A	10/30/2012	10/30/2012	10/30/2012	10/30/2012
Sample Depth in Feet	Screening Level	6.8	12.5	2.7	12.9
Moisture in %			11		9.7
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000				
Diesel/Fuel oil	2000				
Heavy oil	2000				
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250		1.9		1.9
Chromium	19/2000**		2.0 U		2.0 U
Cadmium	2		1.0 U		1.0 U
Arsenic	20		2.0 U		2.0 U
Mercury	2		0.5 UJ		0.5 UJ
Copper			2.9		2.2
Nickel			1.0 U		1.0 U
Zinc			7.6 J		5.6 J
TCLP Metals in mg/L					
Lead	5	0.002 U		0.002 U	
Cadmium	1	0.005 U		0.005 U	
Zinc		0.07 J		0.02 J	
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-10-S4	HCE-10-S7	HCE-11-S2	HCE-11-S7
Sampling Date	Method A	10/30/2012	10/30/2012	10/30/2012	10/30/2012
Sample Depth in Feet	Screening	6.8	12.5	2.7	12.9
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-12-S1	HCE-12-S2	HCE-12-S3	HCE-13-S1
Sampling Date	Method A	10/30/2012	10/30/2012	10/30/2012	11/12/2012
Sample Depth in Feet	Screening Level	1.2	6.5	12.0	2.5 to 4.0
Moisture in %				11	
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000				
Diesel/Fuel oil	2000				
Heavy oil	2000				
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250			1.2	
Chromium	19/2000**			2.0 U	
Cadmium	2			1.0 U	
Arsenic	20			2.0 U	
Mercury	2			0.5 UJ	
Copper				3.9	
Nickel				1.0 U	
Zinc				10 J	
TCLP Metals in mg/L					
Lead	5	0.002 U	0.002 U		0.007
Cadmium	1	0.005 U	0.005 U		0.005 U
Zinc		0.01 J	0.01 UJ		0.02 J
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-12-S1	HCE-12-S2	HCE-12-S3	HCE-13-S1
Sampling Date	Method A	10/30/2012	10/30/2012	10/30/2012	11/12/2012
Sample Depth in Feet	Screening	1.2	6.5	12.0	2.5 to 4.0
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-13-S2	HCE-13-S3	HCE-13-S4	HCE-13-S5
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	7.5 to 9.0	12.5 to 14.0	17.5 to 19.0	22.5 to 24.0
Moisture in %			9.3	9.6	10
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000				
Diesel/Fuel oil	2000				
Heavy oil	2000				
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250		1.0 U	1.0 U	1.0 U
Chromium	19/2000**		2.0 U	2.0 U	2.0 U
Cadmium	2		1.0 U	1.0 U	1.0 U
Arsenic	20		2.0 U	2.0 U	2.0 U
Mercury	2		0.5 U	0.5 U	0.5 U
Copper			5.1	3.5	3.3
Nickel			3.5	2.9	3.5
Zinc			21	15	15
TCLP Metals in mg/L					
Lead	5	0.002 U			
Cadmium	1	0.005 U			
Zinc		0.01 UJ			
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-13-S2	HCE-13-S3	HCE-13-S4	HCE-13-S5
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	7.5 to 9.0	12.5 to 14.0	17.5 to 19.0	22.5 to 24.0
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-13-S8	HCE-13-S9	HCE-13-S10	HCE-14-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening Level	37.5 to 39.0	42.5 to 44.0	47.5 to 49.0	1.5
Moisture in %		12	11	12	
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	
Diesel/Fuel oil	2000	20 U	20 U	20 U	
Heavy oil	2000	50 U	50 U	50 U	
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250				
Chromium	19/2000**				
Cadmium	2				
Arsenic	20				
Mercury	2				
Copper					
Nickel					
Zinc					
TCLP Metals in mg/L					
Lead	5				0.093
Cadmium	1				0.005 U
Zinc					0.13 J
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-13-S8	HCE-13-S9	HCE-13-S10	HCE-14-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/30/2012
Sample Depth in Feet	Screening	37.5 to 39.0	42.5 to 44.0	47.5 to 49.0	1.5
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-14-S2	HCE-14-S3	HCE-15-S2	HCE-16-S1
Sampling Date	Method A	10/30/2012	10/30/2012	10/29/2012	10/29/2012
Sample Depth in Feet	Screening Level	6.5	11.0	6.9	1.0
Moisture in %			10	13	9.8
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000		20 U	20 U	
Diesel/Fuel oil	2000		20 U	20 U	
Heavy oil	2000		50 U	50 U	
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*		5.0 U		
Gasoline	100/30*		5.0 U		
Metals in mg/kg					
Lead	250		1.1		1.4
Chromium	19/2000**		2.0 U		2.0 U
Cadmium	2		1.0 U		1.0 U
Arsenic	20		2.0 U		2.0 U
Mercury	2		0.5 UJ		0.5 UJ
Copper			8.6		2.0 U
Nickel			1.0 U		1.0
Zinc			6.7 J		3.7 J
TCLP Metals in mg/L					
Lead	5	0.028 J			
Cadmium	1	0.005 U			
Zinc		0.08 J			
Volatiles in µg/kg					
MTBE	100		100 U		
Dichlorodifluoromethane			50 U		
Chloromethane			50 U		
Vinyl chloride			50 U		
Bromomethane			50 U		
Chloroethane			50 U		
Trichlorofluoromethane			50 U		
1,1-Dichloroethene			50 U		
Methylene chloride	20		20 U		
trans-1,2-Dichloroethene			50 U		
1,1-Dichloroethane			50 U		
2,2-Dichloropropane			50 U		
cis-1,2-Dichloroethene			50 U		
Chloroform			50 U		
1,1,1-Trichloroethane	2000		50 U		
Carbon tetrachloride			50 U		
1,1-Dichloropropene			50 U		
Benzene	30		20 U		
1,2-Dichloroethane (EDC)			20 U		
Trichloroethene	30		20 U		
1,2-Dichloropropane			50 U		
Dibromomethane			50 U		
Bromodichloromethane			50 U		
cis-1,3-Dichloropropene			50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-14-S2	HCE-14-S3	HCE-15-S2	HCE-16-S1
Sampling Date	Method A	10/30/2012	10/30/2012	10/29/2012	10/29/2012
Sample Depth in Feet	Screening	6.5	11.0	6.9	1.0
Toluene	7000		50 U		
trans-1,3-Dichloropropene			50 U		
1,1,2-Trichloroethane			50 U		
Tetrachloroethene			50 U		
1,3-Dichloropropane			50 U		
Dibromochloromethane			20 U		
1,2-Dibromoethane (EDB)	5		5 U		
Chlorobenzene			50 U		
1,1,1,2-Tetrachloroethane			50 U		
Ethylbenzene	6000		50 U		
Xylenes	9000		50 U		
Styrene			50 U		
Bromoform			50 U		
Isopropylbenzene			50 U		
1,2,3-Trichloropropane			50 U		
Bromobenzene			50 U		
1,1,2,2-Tetrachloroethane			50 U		
n-Propylbenzene			50 U		
2-Chlorotoluene			50 U		
4-Chlorotoluene			50 U		
1,3,5-Trimethylbenzene			50 U		
tert-Butylbenzene			50 U		
1,2,4-Trimethylbenzene			50 U		
sec-Butylbenzene			50 U		
1,3-Dichlorobenzene			50 U		
Isopropyltoluene			50 U		
1,4-Dichlorobenzene			50 U		
1,2-Dichlorobenzene			50 U		
n-Butylbenzene			50 U		
1,2-Dibromo-3-Chloropropane			50 U		
1,2,4-Trichlorobenzene			50 U		
Hexachloro-1,3-butadiene			50 U		
Naphthalene	5000		50 U		
1,2,3-Trichlorobenzene			50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-16-S2	HCE-16-S3	HCE-17-S1	HCE-17-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening Level	7.0	12.5	2.5 to 4.0	7.5 to 9.0
Moisture in %		9.0	9.2	8.6	9.5
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000	20 U	20 U	20 U	20 U
Heavy oil	2000	340	50 U	50 U	640
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U			5.0 U
Gasoline	100/30*	5.0 U			5.0 U
Metals in mg/kg					
Lead	250			1.9	2.3
Chromium	19/2000**			2.0 U	3.3
Cadmium	2			1.0 U	1.0 U
Arsenic	20			2.0 U	2.0 U
Mercury	2			0.5 U	0.5 U
Copper				5.5	23
Nickel				3.0	35
Zinc				21	89
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100	100 U			100 U
Dichlorodifluoromethane		50 U			50 U
Chloromethane		50 U			50 U
Vinyl chloride		50 U			50 U
Bromomethane		50 U			50 U
Chloroethane		50 U			50 U
Trichlorofluoromethane		50 U			50 U
1,1-Dichloroethene		50 U			50 U
Methylene chloride	20	20 U			20 U
trans-1,2-Dichloroethene		50 U			50 U
1,1-Dichloroethane		50 U			50 U
2,2-Dichloropropane		50 U			50 U
cis-1,2-Dichloroethene		50 U			50 U
Chloroform		50 U			50 U
1,1,1-Trichloroethane	2000	50 U			50 U
Carbon tetrachloride		50 U			50 U
1,1-Dichloropropene		50 U			50 U
Benzene	30	20 U			20 U
1,2-Dichloroethane (EDC)		20 U			20 U
Trichloroethene	30	20 U			20 U
1,2-Dichloropropane		50 U			50 U
Dibromomethane		50 U			50 U
Bromodichloromethane		50 U			50 U
cis-1,3-Dichloropropene		50 U			50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-16-S2	HCE-16-S3	HCE-17-S1	HCE-17-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/12/2012	11/12/2012
Sample Depth in Feet	Screening	7.0	12.5	2.5 to 4.0	7.5 to 9.0
Toluene	7000	50 U			50 U
trans-1,3-Dichloropropene		50 U			50 U
1,1,2-Trichloroethane		50 U			50 U
Tetrachloroethene		50 U			50 U
1,3-Dichloropropane		50 U			50 U
Dibromochloromethane		20 U			20 U
1,2-Dibromoethane (EDB)	5	5 U			5 U
Chlorobenzene		50 U			50 U
1,1,1,2-Tetrachloroethane		50 U			50 U
Ethylbenzene	6000	50 U			50 U
Xylenes	9000	50 U			50 U
Styrene		50 U			50 U
Bromoform		50 U			50 U
Isopropylbenzene		50 U			50 U
1,2,3-Trichloropropane		50 U			50 U
Bromobenzene		50 U			50 U
1,1,2,2-Tetrachloroethane		50 U			50 U
n-Propylbenzene		50 U			50 U
2-Chlorotoluene		50 U			50 U
4-Chlorotoluene		50 U			50 U
1,3,5-Trimethylbenzene		50 U			50 U
tert-Butylbenzene		50 U			50 U
1,2,4-Trimethylbenzene		50 U			50 U
sec-Butylbenzene		50 U			50 U
1,3-Dichlorobenzene		50 U			50 U
Isopropyltoluene		50 U			50 U
1,4-Dichlorobenzene		50 U			50 U
1,2-Dichlorobenzene		50 U			50 U
n-Butylbenzene		50 U			50 U
1,2-Dibromo-3-Chloropropane		50 U			50 U
1,2,4-Trichlorobenzene		50 U			50 U
Hexachloro-1,3-butadiene		50 U			50 U
Naphthalene	5000	50 U			50 U
1,2,3-Trichlorobenzene		50 U			50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-17-S3	HCE-17-S4	HCE-17-S8	HCE-18-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/29/2012
Sample Depth in Feet	Screening Level	12.5 to 14.0	17.5 to 18.4	37.5 to 39.0	1.0
Moisture in %		10	9.9	12	11
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		20 U
Heavy oil	2000	1500	68		50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U		5.0 U	
Gasoline	100/30*	5.0 U		5.0 U	
Metals in mg/kg					
Lead	250				34
Chromium	19/2000**				150
Cadmium	2				1.0 U
Arsenic	20				2.0 U
Mercury	2				0.5 UJ
Copper					19
Nickel					2.0
Zinc					54 J
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100	100 U		100 U	
Dichlorodifluoromethane		50 U		50 U	
Chloromethane		50 U		50 U	
Vinyl chloride		50 U		50 U	
Bromomethane		50 U		50 U	
Chloroethane		50 U		50 U	
Trichlorofluoromethane		50 U		50 U	
1,1-Dichloroethene		50 U		50 U	
Methylene chloride	20	20 U		20 U	
trans-1,2-Dichloroethene		50 U		50 U	
1,1-Dichloroethane		50 U		50 U	
2,2-Dichloropropane		50 U		50 U	
cis-1,2-Dichloroethene		50 U		50 U	
Chloroform		50 U		50 U	
1,1,1-Trichloroethane	2000	50 U		50 U	
Carbon tetrachloride		50 U		50 U	
1,1-Dichloropropene		50 U		50 U	
Benzene	30	20 U		20 U	
1,2-Dichloroethane (EDC)		20 U		20 U	
Trichloroethene	30	20 U		20 U	
1,2-Dichloropropane		50 U		50 U	
Dibromomethane		50 U		50 U	
Bromodichloromethane		50 U		50 U	
cis-1,3-Dichloropropene		50 U		50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-17-S3	HCE-17-S4	HCE-17-S8	HCE-18-S1
Sampling Date	Method A	11/12/2012	11/12/2012	11/12/2012	10/29/2012
Sample Depth in Feet	Screening	12.5 to 14.0	17.5 to 18.4	37.5 to 39.0	1.0
Toluene	7000	50 U		50 U	
trans-1,3-Dichloropropene		50 U		50 U	
1,1,2-Trichloroethane		50 U		50 U	
Tetrachloroethene		50 U		50 U	
1,3-Dichloropropane		50 U		50 U	
Dibromochloromethane		20 U		20 U	
1,2-Dibromoethane (EDB)	5	5 U		5 U	
Chlorobenzene		50 U		50 U	
1,1,1,2-Tetrachloroethane		50 U		50 U	
Ethylbenzene	6000	50 U		50 U	
Xylenes	9000	50 U		50 U	
Styrene		50 U		50 U	
Bromoform		50 U		50 U	
Isopropylbenzene		50 U		50 U	
1,2,3-Trichloropropane		50 U		50 U	
Bromobenzene		50 U		50 U	
1,1,2,2-Tetrachloroethane		50 U		50 U	
n-Propylbenzene		50 U		50 U	
2-Chlorotoluene		50 U		50 U	
4-Chlorotoluene		50 U		50 U	
1,3,5-Trimethylbenzene		50 U		50 U	
tert-Butylbenzene		50 U		50 U	
1,2,4-Trimethylbenzene		50 U		50 U	
sec-Butylbenzene		50 U		50 U	
1,3-Dichlorobenzene		50 U		50 U	
Isopropyltoluene		50 U		50 U	
1,4-Dichlorobenzene		50 U		50 U	
1,2-Dichlorobenzene		50 U		50 U	
n-Butylbenzene		50 U		50 U	
1,2-Dibromo-3-Chloropropane		50 U		50 U	
1,2,4-Trichlorobenzene		50 U		50 U	
Hexachloro-1,3-butadiene		50 U		50 U	
Naphthalene	5000	50 U		50 U	
1,2,3-Trichlorobenzene		50 U		50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-19-S1	HCE-20-S1	HCE-21-S2	HCE-21-S3
Sampling Date	Method A	10/30/2012	10/30/2012	11/13/2012	11/13/2012
Sample Depth in Feet	Screening Level	1.4	0.8	7.5 to 9.0	12.5 to 14.0
Moisture in %		10	9.8	9.2	9.1
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000			20 U	20 U
Diesel/Fuel oil	2000			20 U	20 U
Heavy oil	2000			50 U	50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250	1.7	1.0 U	1.0	1.0 U
Chromium	19/2000**	2.2	2.0 U	2.0 U	2.0 U
Cadmium	2	1.0 U	1.0 U	1.0 U	1.0 U
Arsenic	20	2.0 U	2.0 U	2.0 U	2.0 U
Mercury	2	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Copper		3.9	2.0 U	5.8	3.2
Nickel		1.0 U	1.0 U	6.5	1.0 U
Zinc		5.6 J	2.8 J	24	14
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100				
Dichlorodifluoromethane					
Chloromethane					
Vinyl chloride					
Bromomethane					
Chloroethane					
Trichlorofluoromethane					
1,1-Dichloroethene					
Methylene chloride	20				
trans-1,2-Dichloroethene					
1,1-Dichloroethane					
2,2-Dichloropropane					
cis-1,2-Dichloroethene					
Chloroform					
1,1,1-Trichloroethane	2000				
Carbon tetrachloride					
1,1-Dichloropropene					
Benzene	30				
1,2-Dichloroethane (EDC)					
Trichloroethene	30				
1,2-Dichloropropane					
Dibromomethane					
Bromodichloromethane					
cis-1,3-Dichloropropene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-19-S1	HCE-20-S1	HCE-21-S2	HCE-21-S3
Sampling Date	Method A	10/30/2012	10/30/2012	11/13/2012	11/13/2012
Sample Depth in Feet	Screening	1.4	0.8	7.5 to 9.0	12.5 to 14.0
Toluene	7000				
trans-1,3-Dichloropropene					
1,1,2-Trichloroethane					
Tetrachloroethene					
1,3-Dichloropropane					
Dibromochloromethane					
1,2-Dibromoethane (EDB)	5				
Chlorobenzene					
1,1,1,2-Tetrachloroethane					
Ethylbenzene	6000				
Xylenes	9000				
Styrene					
Bromoform					
Isopropylbenzene					
1,2,3-Trichloropropane					
Bromobenzene					
1,1,2,2-Tetrachloroethane					
n-Propylbenzene					
2-Chlorotoluene					
4-Chlorotoluene					
1,3,5-Trimethylbenzene					
tert-Butylbenzene					
1,2,4-Trimethylbenzene					
sec-Butylbenzene					
1,3-Dichlorobenzene					
Isopropyltoluene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
n-Butylbenzene					
1,2-Dibromo-3-Chloropropane					
1,2,4-Trichlorobenzene					
Hexachloro-1,3-butadiene					
Naphthalene	5000				
1,2,3-Trichlorobenzene					

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-21-S4	HCE-21-S5	HCE-21-S7	HCE-22-S1
Sampling Date	Method A	11/13/2012	11/13/2012	11/13/2012	10/29/2012
Sample Depth in Feet	Screening Level	17.5 to 19.0	22.5 to 24.0	32.5 to 34.0	1.6
Moisture in %		9.2	9.1	12	10
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		20 U
Heavy oil	2000	50 U	50 U		50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*		5.0 U	5.0 U	
Gasoline	100/30*		5.0 U	5.0 U	
Metals in mg/kg					
Lead	250				
Chromium	19/2000**				
Cadmium	2				
Arsenic	20				
Mercury	2				
Copper					
Nickel					
Zinc					
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100		100 U	100 U	
Dichlorodifluoromethane			50 U	50 U	
Chloromethane			50 U	50 U	
Vinyl chloride			50 U	50 U	
Bromomethane			50 U	50 U	
Chloroethane			50 U	50 U	
Trichlorofluoromethane			50 U	50 U	
1,1-Dichloroethene			50 U	50 U	
Methylene chloride	20		20 U	20 U	
trans-1,2-Dichloroethene			50 U	50 U	
1,1-Dichloroethane			50 U	50 U	
2,2-Dichloropropane			50 U	50 U	
cis-1,2-Dichloroethene			50 U	50 U	
Chloroform			50 U	50 U	
1,1,1-Trichloroethane	2000		50 U	50 U	
Carbon tetrachloride			50 U	50 U	
1,1-Dichloropropene			50 U	50 U	
Benzene	30		20 U	20 U	
1,2-Dichloroethane (EDC)			20 U	20 U	
Trichloroethene	30		20 U	20 U	
1,2-Dichloropropane			50 U	50 U	
Dibromomethane			50 U	50 U	
Bromodichloromethane			50 U	50 U	
cis-1,3-Dichloropropene			50 U	50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-21-S4	HCE-21-S5	HCE-21-S7	HCE-22-S1
Sampling Date	Method A	11/13/2012	11/13/2012	11/13/2012	10/29/2012
Sample Depth in Feet	Screening	17.5 to 19.0	22.5 to 24.0	32.5 to 34.0	1.6
Toluene	7000		50 U	50 U	
trans-1,3-Dichloropropene			50 U	50 U	
1,1,2-Trichloroethane			50 U	50 U	
Tetrachloroethene			50 U	50 U	
1,3-Dichloropropane			50 U	50 U	
Dibromochloromethane			20 U	20 U	
1,2-Dibromoethane (EDB)	5		5 U	5 U	
Chlorobenzene			50 U	50 U	
1,1,1,2-Tetrachloroethane			50 U	50 U	
Ethylbenzene	6000		50 U	50 U	
Xylenes	9000		50 U	50 U	
Styrene			50 U	50 U	
Bromoform			50 U	50 U	
Isopropylbenzene			50 U	50 U	
1,2,3-Trichloropropane			50 U	50 U	
Bromobenzene			50 U	50 U	
1,1,2,2-Tetrachloroethane			50 U	50 U	
n-Propylbenzene			50 U	50 U	
2-Chlorotoluene			50 U	50 U	
4-Chlorotoluene			50 U	50 U	
1,3,5-Trimethylbenzene			50 U	50 U	
tert-Butylbenzene			50 U	50 U	
1,2,4-Trimethylbenzene			50 U	50 U	
sec-Butylbenzene			50 U	50 U	
1,3-Dichlorobenzene			50 U	50 U	
Isopropyltoluene			50 U	50 U	
1,4-Dichlorobenzene			50 U	50 U	
1,2-Dichlorobenzene			50 U	50 U	
n-Butylbenzene			50 U	50 U	
1,2-Dibromo-3-Chloropropane			50 U	50 U	
1,2,4-Trichlorobenzene			50 U	50 U	
Hexachloro-1,3-butadiene			50 U	50 U	
Naphthalene	5000		50 U	50 U	
1,2,3-Trichlorobenzene			50 U	50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-22-S2	HCE-23-S1	MW-1-S1	MW-1-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/16/2012	11/16/2012
Sample Depth in Feet	Screening Level	6.1	1.1	5.0 to 6.5	10.0 to 11.5
Moisture in %		9.0	9.0	8.9	9.1
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	
Diesel/Fuel oil	2000	20 U	20 U	20 U	
Heavy oil	2000	50 U	50 U	50 U	
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*				
Gasoline	100/30*				
Metals in mg/kg					
Lead	250			1.0 U	1.0 U
Chromium	19/2000**			2.0 U	2.0 U
Cadmium	2			1.0 U	1.0 U
Arsenic	20			2.0 U	2.0 U
Mercury	2			0.5 U	0.5 U
Copper				2.0 U	2.8
Nickel				2.3	5.1
Zinc				7.4	13
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100			100 U	
Dichlorodifluoromethane				50 U	
Chloromethane				50 U	
Vinyl chloride				50 U	
Bromomethane				50 U	
Chloroethane				50 U	
Trichlorofluoromethane				50 U	
1,1-Dichloroethene				50 U	
Methylene chloride	20			20 U	
trans-1,2-Dichloroethene				50 U	
1,1-Dichloroethane				50 U	
2,2-Dichloropropane				50 U	
cis-1,2-Dichloroethene				50 U	
Chloroform				50 U	
1,1,1-Trichloroethane	2000			50 U	
Carbon tetrachloride				50 U	
1,1-Dichloropropene				50 U	
Benzene	30			20 U	
1,2-Dichloroethane (EDC)				20 U	
Trichloroethene	30			20 U	
1,2-Dichloropropane				50 U	
Dibromomethane				50 U	
Bromodichloromethane				50 U	
cis-1,3-Dichloropropene				50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	HCE-22-S2	HCE-23-S1	MW-1-S1	MW-1-S2
Sampling Date	Method A	10/29/2012	10/29/2012	11/16/2012	11/16/2012
Sample Depth in Feet	Screening	6.1	1.1	5.0 to 6.5	10.0 to 11.5
Toluene	7000			50 U	
trans-1,3-Dichloropropene				50 U	
1,1,2-Trichloroethane				50 U	
Tetrachloroethene				50 U	
1,3-Dichloropropane				50 U	
Dibromochloromethane				20 U	
1,2-Dibromoethane (EDB)	5			5 U	
Chlorobenzene				50 U	
1,1,1,2-Tetrachloroethane				50 U	
Ethylbenzene	6000			50 U	
Xylenes	9000			50 U	
Styrene				50 U	
Bromoform				50 U	
Isopropylbenzene				50 U	
1,2,3-Trichloropropane				50 U	
Bromobenzene				50 U	
1,1,2,2-Tetrachloroethane				50 U	
n-Propylbenzene				50 U	
2-Chlorotoluene				50 U	
4-Chlorotoluene				50 U	
1,3,5-Trimethylbenzene				50 U	
tert-Butylbenzene				50 U	
1,2,4-Trimethylbenzene				50 U	
sec-Butylbenzene				50 U	
1,3-Dichlorobenzene				50 U	
Isopropyltoluene				50 U	
1,4-Dichlorobenzene				50 U	
1,2-Dichlorobenzene				50 U	
n-Butylbenzene				50 U	
1,2-Dibromo-3-Chloropropane				50 U	
1,2,4-Trichlorobenzene				50 U	
Hexachloro-1,3-butadiene				50 U	
Naphthalene	5000			50 U	
1,2,3-Trichlorobenzene				50 U	

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-1-S8	MW-1-S10	MW-2-S1	MW-2-S2
Sampling Date	Method A	11/16/2012	11/16/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening Level	40.0 to 41.5	50.0 to 51.0	5.0 to 6.5	10.0 to 11.5
Moisture in %		9.8	9.9	10	11
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U		20 U
Diesel/Fuel oil	2000	20 U	20 U		180
Heavy oil	2000	50 U	50 U		130
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U	5.0 U		5.0 U
Gasoline	100/30*	5.0 U	5.0 U		220
Metals in mg/kg					
Lead	250				1.0 U
Chromium	19/2000**				2.0 U
Cadmium	2				1.0 U
Arsenic	20				2.0 U
Mercury	2				0.5 U
Copper					12
Nickel					9.9
Zinc					49
TCLP Metals in mg/L					
Lead	5			0.002 U	
Cadmium	1			0.005 U	
Zinc				0.01 UJ	
Volatiles in µg/kg					
MTBE	100	100 U	100 U		
Dichlorodifluoromethane		50 U	50 U		
Chloromethane		50 U	50 U		
Vinyl chloride		50 U	50 U		
Bromomethane		50 U	50 U		
Chloroethane		50 U	50 U		
Trichlorofluoromethane		50 U	50 U		
1,1-Dichloroethene		50 U	50 U		
Methylene chloride	20	20 U	20 U		
trans-1,2-Dichloroethene		50 U	50 U		
1,1-Dichloroethane		50 U	50 U		
2,2-Dichloropropane		50 U	50 U		
cis-1,2-Dichloroethene		50 U	50 U		
Chloroform		50 U	50 U		
1,1,1-Trichloroethane	2000	50 U	50 U		
Carbon tetrachloride		50 U	50 U		
1,1-Dichloropropene		50 U	50 U		
Benzene	30	20 U	20 U		
1,2-Dichloroethane (EDC)		20 U	20 U		
Trichloroethene	30	20 U	20 U		
1,2-Dichloropropane		50 U	50 U		
Dibromomethane		50 U	50 U		
Bromodichloromethane		50 U	50 U		
cis-1,3-Dichloropropene		50 U	50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-1-S8	MW-1-S10	MW-2-S1	MW-2-S2
Sampling Date	Method A	11/16/2012	11/16/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening	40.0 to 41.5	50.0 to 51.0	5.0 to 6.5	10.0 to 11.5
Toluene	7000	50 U	50 U		
trans-1,3-Dichloropropene		50 U	50 U		
1,1,2-Trichloroethane		50 U	50 U		
Tetrachloroethene		50 U	50 U		
1,3-Dichloropropane		50 U	50 U		
Dibromochloromethane		20 U	20 U		
1,2-Dibromoethane (EDB)	5	5 U	5 U		
Chlorobenzene		50 U	50 U		
1,1,1,2-Tetrachloroethane		50 U	50 U		
Ethylbenzene	6000	50 U	50 U		
Xylenes	9000	50 U	50 U		
Styrene		50 U	50 U		
Bromoform		50 U	50 U		
Isopropylbenzene		50 U	50 U		
1,2,3-Trichloropropane		50 U	50 U		
Bromobenzene		50 U	50 U		
1,1,2,2-Tetrachloroethane		50 U	50 U		
n-Propylbenzene		50 U	50 U		
2-Chlorotoluene		50 U	50 U		
4-Chlorotoluene		50 U	50 U		
1,3,5-Trimethylbenzene		50 U	50 U		
tert-Butylbenzene		50 U	50 U		
1,2,4-Trimethylbenzene		50 U	50 U		
sec-Butylbenzene		50 U	50 U		
1,3-Dichlorobenzene		50 U	50 U		
Isopropyltoluene		50 U	50 U		
1,4-Dichlorobenzene		50 U	50 U		
1,2-Dichlorobenzene		50 U	50 U		
n-Butylbenzene		50 U	50 U		
1,2-Dibromo-3-Chloropropane		50 U	50 U		
1,2,4-Trichlorobenzene		50 U	50 U		
Hexachloro-1,3-butadiene		50 U	50 U		
Naphthalene	5000	50 U	50 U		
1,2,3-Trichlorobenzene		50 U	50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-2-S3	MW-2-S4	MW-2-S5	MW-2-S6
Sampling Date	Method A	11/15/2012	11/15/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening Level	15.0 to 16.5	20.0 to 21.3	25.0 to 26.0	30.0 to 31.5
Moisture in %		11	11	11	12
NWTPH-Dx in mg/kg					
Kerosene/Jet fuel	2000	20 U	20 U	20 U	20 U
Diesel/Fuel oil	2000	390	420	20	24
Heavy oil	2000	270	230	50 U	50 U
NWTPH-Gx in mg/kg					
Mineral spirits/Stoddard	100/30*	5.0 U	5.0 U	5.0 U	5.0 U
Gasoline	100/30*	90	190	28	5.0 U
Metals in mg/kg					
Lead	250	1.0 U	1.0 U	1.0 U	
Chromium	19/2000**	2.0 U	2.0 U	2.0 U	
Cadmium	2	1.0 U	1.0 U	1.0 U	
Arsenic	20	2.0 U	2.0 U	2.0 U	
Mercury	2	0.5 U	0.5 U	0.5 U	
Copper		5.1	6.7	3.7	
Nickel		3.4	15	7.9 J	
Zinc		22	29	16 J	
TCLP Metals in mg/L					
Lead	5				
Cadmium	1				
Zinc					
Volatiles in µg/kg					
MTBE	100		100 U	100 U	100 U
Dichlorodifluoromethane			50 U	50 U	50 U
Chloromethane			50 U	50 U	50 U
Vinyl chloride			50 U	50 U	50 U
Bromomethane			50 U	50 U	50 U
Chloroethane			50 U	50 U	50 U
Trichlorofluoromethane			50 U	50 U	50 U
1,1-Dichloroethene			50 U	50 U	50 U
Methylene chloride	20		20 U	20 U	20 U
trans-1,2-Dichloroethene			50 U	50 U	50 U
1,1-Dichloroethane			50 U	50 U	50 U
2,2-Dichloropropane			50 U	50 U	50 U
cis-1,2-Dichloroethene			50 U	50 U	50 U
Chloroform			50 U	50 U	50 U
1,1,1-Trichloroethane	2000		50 U	50 U	50 U
Carbon tetrachloride			50 U	50 U	50 U
1,1-Dichloropropene			50 U	50 U	50 U
Benzene	30		20 U	20 U	20 U
1,2-Dichloroethane (EDC)			20 U	20 U	20 U
Trichloroethene	30		20 U	20 U	20 U
1,2-Dichloropropane			50 U	50 U	50 U
Dibromomethane			50 U	50 U	50 U
Bromodichloromethane			50 U	50 U	50 U
cis-1,3-Dichloropropene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-2-S3	MW-2-S4	MW-2-S5	MW-2-S6
Sampling Date	Method A	11/15/2012	11/15/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening	15.0 to 16.5	20.0 to 21.3	25.0 to 26.0	30.0 to 31.5
Toluene	7000		50 U	50 U	50 U
trans-1,3-Dichloropropene			50 U	50 U	50 U
1,1,2-Trichloroethane			50 U	50 U	50 U
Tetrachloroethene			50 U	50 U	50 U
1,3-Dichloropropane			50 U	50 U	50 U
Dibromochloromethane			20 U	20 U	20 U
1,2-Dibromoethane (EDB)	5		5 U	5 U	5 U
Chlorobenzene			50 U	50 U	50 U
1,1,1,2-Tetrachloroethane			50 U	50 U	50 U
Ethylbenzene	6000		50 U	50 U	50 U
Xylenes	9000		50 U	50 U	50 U
Styrene			50 U	50 U	50 U
Bromoform			50 U	50 U	50 U
Isopropylbenzene			73	50 U	50 U
1,2,3-Trichloropropane			50 U	50 U	50 U
Bromobenzene			50 U	50 U	50 U
1,1,2,2-Tetrachloroethane			50 U	50 U	50 U
n-Propylbenzene			79	50 U	50 U
2-Chlorotoluene			50 U	50 U	50 U
4-Chlorotoluene			50 U	50 U	50 U
1,3,5-Trimethylbenzene			50 U	50 U	50 U
tert-Butylbenzene			50 U	50 U	50 U
1,2,4-Trimethylbenzene			110	50 U	50 U
sec-Butylbenzene			330	50 U	50 U
1,3-Dichlorobenzene			50 U	50 U	50 U
Isopropyltoluene			50 U	50 U	50 U
1,4-Dichlorobenzene			50 U	50 U	50 U
1,2-Dichlorobenzene			50 U	50 U	50 U
n-Butylbenzene			120	79	50 U
1,2-Dibromo-3-Chloropropane			50 U	50 U	50 U
1,2,4-Trichlorobenzene			50 U	50 U	50 U
Hexachloro-1,3-butadiene			50 U	50 U	50 U
Naphthalene	5000		50 U	50 U	50 U
1,2,3-Trichlorobenzene			50 U	50 U	50 U

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-2-S7	MW-2-S8	MW-2-S10
Sampling Date	Method A	11/15/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening Level	35.0 to 36.5	40.0 to 41.5	50.0 to 51.5
Moisture in %		13	13	13
NWTPH-Dx in mg/kg				
Kerosene/Jet fuel	2000	20 U	20 U	20 U
Diesel/Fuel oil	2000	20 U	44	20 U
Heavy oil	2000	50 U	50 U	50 U
NWTPH-Gx in mg/kg				
Mineral spirits/Stoddard	100/30*			
Gasoline	100/30*			
Metals in mg/kg				
Lead	250			
Chromium	19/2000**			
Cadmium	2			
Arsenic	20			
Mercury	2			
Copper				
Nickel				
Zinc				
TCLP Metals in mg/L				
Lead	5			
Cadmium	1			
Zinc				
Volatiles in µg/kg				
MTBE	100	100 U		
Dichlorodifluoromethane		50 U		
Chloromethane		50 U		
Vinyl chloride		50 U		
Bromomethane		50 U		
Chloroethane		50 U		
Trichlorofluoromethane		50 U		
1,1-Dichloroethene		50 U		
Methylene chloride	20	20 U		
trans-1,2-Dichloroethene		50 U		
1,1-Dichloroethane		50 U		
2,2-Dichloropropane		50 U		
cis-1,2-Dichloroethene		50 U		
Chloroform		50 U		
1,1,1-Trichloroethane	2000	50 U		
Carbon tetrachloride		50 U		
1,1-Dichloropropene		50 U		
Benzene	30	20 U		
1,2-Dichloroethane (EDC)		20 U		
Trichloroethene	30	20 U		
1,2-Dichloropropane		50 U		
Dibromomethane		50 U		
Bromodichloromethane		50 U		
cis-1,3-Dichloropropene		50 U		

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA	MW-2-S7	MW-2-S8	MW-2-S10
Sampling Date	Method A	11/15/2012	11/15/2012	11/15/2012
Sample Depth in Feet	Screening	35.0 to 36.5	40.0 to 41.5	50.0 to 51.5
Toluene	7000	50 U		
trans-1,3-Dichloropropene		50 U		
1,1,2-Trichloroethane		50 U		
Tetrachloroethene		50 U		
1,3-Dichloropropane		50 U		
Dibromochloromethane		20 U		
1,2-Dibromoethane (EDB)	5	5 U		
Chlorobenzene		50 U		
1,1,1,2-Tetrachloroethane		50 U		
Ethylbenzene	6000	50 U		
Xylenes	9000	50 U		
Styrene		50 U		
Bromoform		50 U		
Isopropylbenzene		50 U		
1,2,3-Trichloropropane		50 U		
Bromobenzene		50 U		
1,1,2,2-Tetrachloroethane		50 U		
n-Propylbenzene		50 U		
2-Chlorotoluene		50 U		
4-Chlorotoluene		50 U		
1,3,5-Trimethylbenzene		50 U		
tert-Butylbenzene		50 U		
1,2,4-Trimethylbenzene		50 U		
sec-Butylbenzene		50 U		
1,3-Dichlorobenzene		50 U		
Isopropyltoluene		50 U		
1,4-Dichlorobenzene		50 U		
1,2-Dichlorobenzene		50 U		
n-Butylbenzene		50 U		
1,2-Dibromo-3-Chloropropane		50 U		
1,2,4-Trichlorobenzene		50 U		
Hexachloro-1,3-butadiene		50 U		
Naphthalene	5000	50 U		
1,2,3-Trichlorobenzene		50 U		

U = Not detected at the reporting limit indicated.
J = Estimated value.
* 100 mg/kg for gasoline mixtures without benzene and the total of ethylbenzene, toluene, and xylenes are less than 1% of the gasoline mixture; 30 mg/kg for all other gasoline mixtures
** 19 mg/kg as Chromium VI/2000 mg/kg as Chromium III.
Concentrations that exceed screening level are boxed.

Table 3 - Analytical Results for Water Samples

Sample ID	MTCA Method A Screening Level	MW-1	MW-2
Sampling Date		11/28/2012	11/28/2012
NWTPH-Dx in mg/L			
Kerosene/Jet fuel	0.5	0.20 U	0.20 U
Diesel/Fuel oil	0.5	0.20 U	0.20 U
Heavy oil	0.5	0.50 U	0.50 U
NWTPH-Gx in mg/L			
Mineral spirits/Stoddard	0.8/1.0*	0.10 U	0.10 U
Gasoline	0.8/1.0*	0.10 U	0.10 U
Metals in mg/L			
Lead	0.015	0.002 U	0.002 U
Chromium	0.05	0.01 U	0.01 U
Cadmium	0.005	0.005 U	0.005 U
Arsenic	0.005	0.005 U	0.005 U
Mercury	0.002	0.0005 UJ	0.0005 UJ
Copper		0.01 U	0.01 U
Nickel		0.01 U	0.01 U
Zinc		0.01 UJ	0.01 UJ
Volatiles in µg/L			
MTBE	20	5.0 U	5.0 U
Dichlorodifluoromethane		1.0 U	1.0 U
Chloromethane		1.0 U	1.0 U
Vinyl chloride	0.2	0.2 U	0.2 U
Bromomethane		1.0 U	1.0 U
Chloroethane		1.0 U	1.0 U
Trichlorofluoromethane		1.0 U	1.0 U
1,1-Dichloroethene		1.0 U	1.0 U
Methylene chloride	5	1.0 U	1.0 U
trans-1,2-Dichloroethene		1.0 U	1.0 U
1,1-Dichloroethane		1.0 U	1.0 U
2,2-Dichloropropane		1.0 U	1.0 U
cis-1,2-Dichloroethene		1.0 U	1.0 U
Chloroform		1.0 U	1.0 U
1,1,1-Trichloroethane	200	1.0 U	1.0 U
Carbon tetrachloride		1.0 U	1.0 U
1,1-Dichloropropene		1.0 U	1.0 U
Benzene	5	1.0 U	1.0 U
1,2-Dichloroethane (EDC)	5	1.0 U	1.0 U
Trichloroethene	5	1.0 U	1.0 U
1,2-Dichloropropane		1.0 U	1.0 U
Dibromomethane		1.0 U	1.0 U
Bromodichloromethane		1.0 U	1.0 U
cis-1,3-Dichloropropene		1.0 U	1.0 U
Toluene	1000	1.0 U	1.0 U
trans-1,3-Dichloropropene		1.0 U	1.0 U
1,1,2-Trichloroethane		1.0 U	1.0 U
Tetrachloroethene	5	1.0 U	1.0 U
1,3-Dichloropropane		1.0 U	1.0 U
Dibromochloromethane		1.0 U	1.0 U
1,2-Dibromoethane (EDB)	0.01	0.01 U	0.01 U
Chlorobenzene		1.0 U	1.0 U
1,1,1,2-Tetrachloroethane		1.0 U	1.0 U
Ethylbenzene	700	1.0 U	1.0 U
Xylenes	1000	1.0 U	1.0 U

Table 3 - Analytical Results for Water Samples

Sample ID	MTCA	MW-1	MW-2
Sampling Date	Method A Screening	11/28/2012	11/28/2012
Styrene		1.0 U	1.0 U
Bromoform		1.0 U	1.0 U
Isopropylbenzene		1.0 U	1.0 U
1,2,3-Trichloropropane		1.0 U	1.0 U
Bromobenzene		1.0 U	1.0 U
1,1,2,2-Tetrachloroethane		1.0 U	1.0 U
n-Propylbenzene		1.0 U	1.0 U
2-Chlorotoluene		1.0 U	1.0 U
4-Chlorotoluene		1.0 U	1.0 U
1,3,5-Trimethylbenzene		1.0 U	1.0 U
tert-Butylbenzene		1.0 U	1.0 U
1,2,4-Trimethylbenzene		1.0 U	1.0 U
sec-Butylbenzene		1.0 U	1.0 U
1,3-Dichlorobenzene		1.0 U	1.0 U
Isopropyltoluene		1.0 U	1.0 U
1,4-Dichlorobenzene		1.0 U	1.0 U
1,2-Dichlorobenzene		1.0 U	1.0 U
n-Butylbenzene		1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane		1.0 U	1.0 U
1,2,4-Trichlorobenzene		1.0 U	1.0 U
Hexachloro-1,3-butadiene		1.0 U	1.0 U
Naphthalene	160	1.0 U	1.0 U
1,2,3-Trichlorobenzene		1.0 U	1.0 U

* 1.0 mg/L for gasoline mixtures without benzene and the total of ethylbenzene, toluene, and xylenes are less than 1% of the gasoline mixture; 0.8 mg/L for all other gasoline mixtures.

U = Not detected at the reporting limit indicated.

J = Estimated value.

Table 4 - Summary of Cleanup Levels for Chemicals of Concern

Chemicals of Concern	MTCA Method A Soil Screening Level	MTCA Method A Groundwater Screening Level
NWTPH-Dx in mg/kg or mg/L		
Kerosene/Jet fuel	2000	0.5
Diesel/Fuel oil	2000	0.5
Heavy oil	2000	0.5
NWTPH-Gx in mg/kg or mg/L		
Mineral spirits/Stoddard	100/30*	0.8/1.0**
Gasoline	100/30*	0.8/1.0**
Metals in mg/kg or mg/L		
Lead	250	0.015
Chromium	19/2000***	0.05
Cadmium	2	0.005
Arsenic	20	0.005
Mercury	2	0.002
Copper		
Nickel		
Zinc		
TCLP Metals in mg/L		
Lead	5	
Cadmium	1	
Zinc		
Volatiles in µg/kg or µg/L		
MTBE	100	20
Dichlorodifluoromethane		
Chloromethane		
Vinyl chloride		0.2
Bromomethane		
Chloroethane		
Trichlorofluoromethane		
1,1-Dichloroethene		
Methylene chloride	20	5
trans-1,2-Dichloroethene		
1,1-Dichloroethane		
2,2-Dichloropropane		
cis-1,2-Dichloroethene		
Chloroform		
1,1,1-Trichloroethane	2000	200
Carbon tetrachloride		
1,1-Dichloropropene		
Benzene	30	5
1,2-Dichloroethane (EDC)		5
Trichloroethene	30	5
1,2-Dichloropropane		
Dibromomethane		
Bromodichloromethane		
cis-1,3-Dichloropropene		
Toluene	7000	1000
Volatiles in µg/kg or µg/L cont.		
trans-1,3-Dichloropropene		
1,1,2-Trichloroethane		
Tetrachloroethene		5
1,3-Dichloropropane		
Dibromochloromethane		

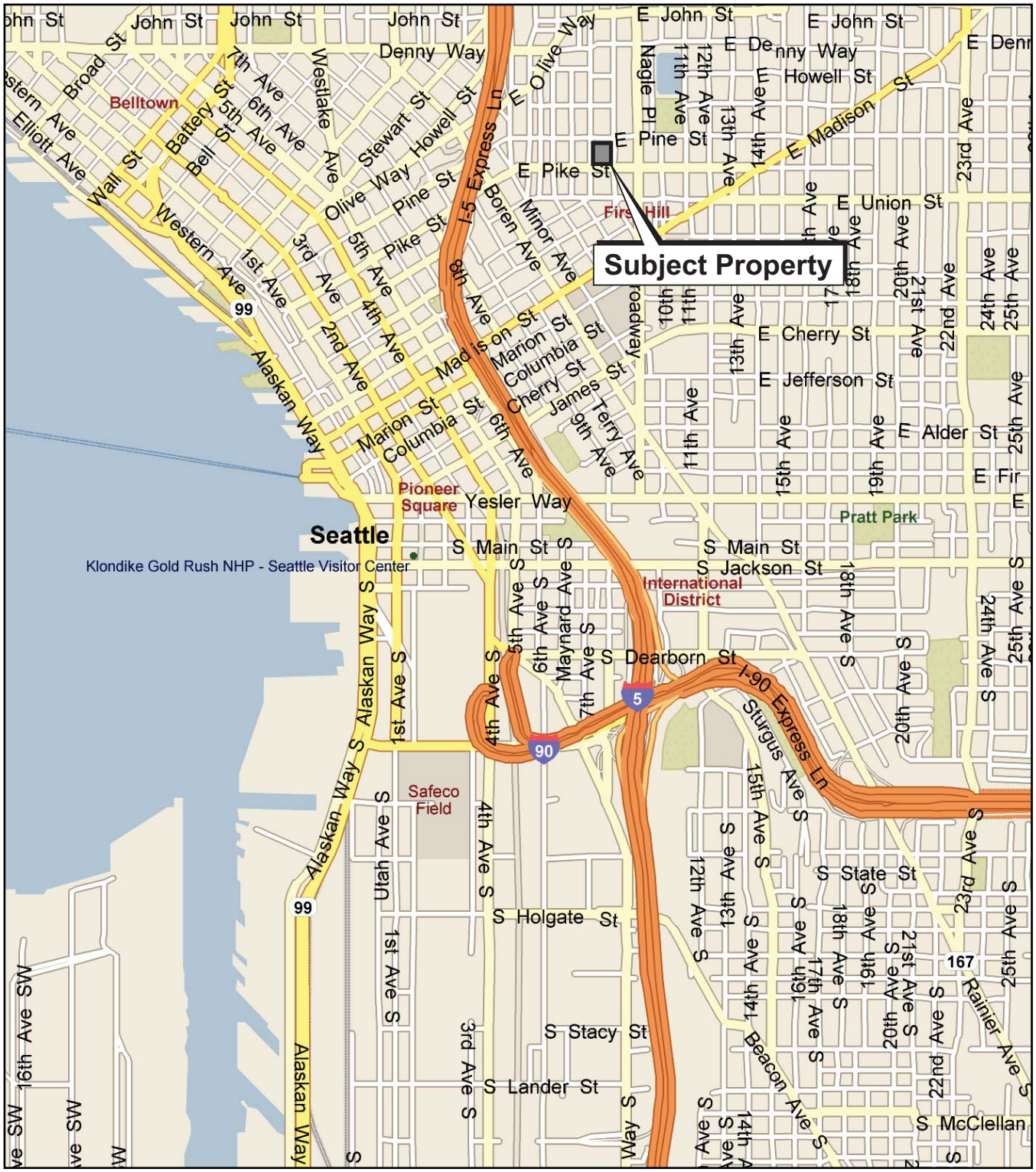
Table 4 - Summary of Cleanup Levels for Chemicals of Concern

Chemicals of Concern	MTCA Method A	MTCA Method A
1,2-Dibromoethane (EDB)	5	0.01
Chlorobenzene		
1,1,1,2-Tetrachloroethane		
Ethylbenzene	6000	700
Xylenes	9000	1000
Styrene		
Bromoform		
Isopropylbenzene		
1,2,3-Trichloropropane		
Bromobenzene		
1,1,2,2-Tetrachloroethane		
n-Propylbenzene		
2-Chlorotoluene		
4-Chlorotoluene		
1,3,5-Trimethylbenzene		
tert-Butylbenzene		
1,2,4-Trimethylbenzene		
sec-Butylbenzene		
1,3-Dichlorobenzene		
Isopropyltoluene		
1,4-Dichlorobenzene		
1,2-Dichlorobenzene		
n-Butylbenzene		
1,2-Dibromo-3-Chloropropane		
1,2,4-Trichlorobenzene		
Hexachloro-1,3-butadiene		
Naphthalene	5000	160
1,2,3-Trichlorobenzene		

* 100 mg/kg for gasoline mixtures without benzene and the total of ethylbenzene, toluene, and xylenes are less than 1% of the gasoline mixture; 30 mg/kg for all other gasoline mixtures.

** 1.0 mg/L for gasoline mixtures without benzene and the total of ethylbenzene, toluene, and xylenes are less than 1% of the gasoline mixture; 0.8 mg/L for all other gasoline mixtures.

*** 19 mg/kg as Chromium VI/2000 mg/kg as Chromium III.



Note: Base map prepared from Microsoft Streets and Trips 2002.

0 2,000 4,000

Approximate Scale in Feet

N

Boylston Development Project
Seattle, Washington

Vicinity Map

17859-02 12/12

HARTCROWSER

Figure
1

EAL 12/06/12 1785902-AA.cdr

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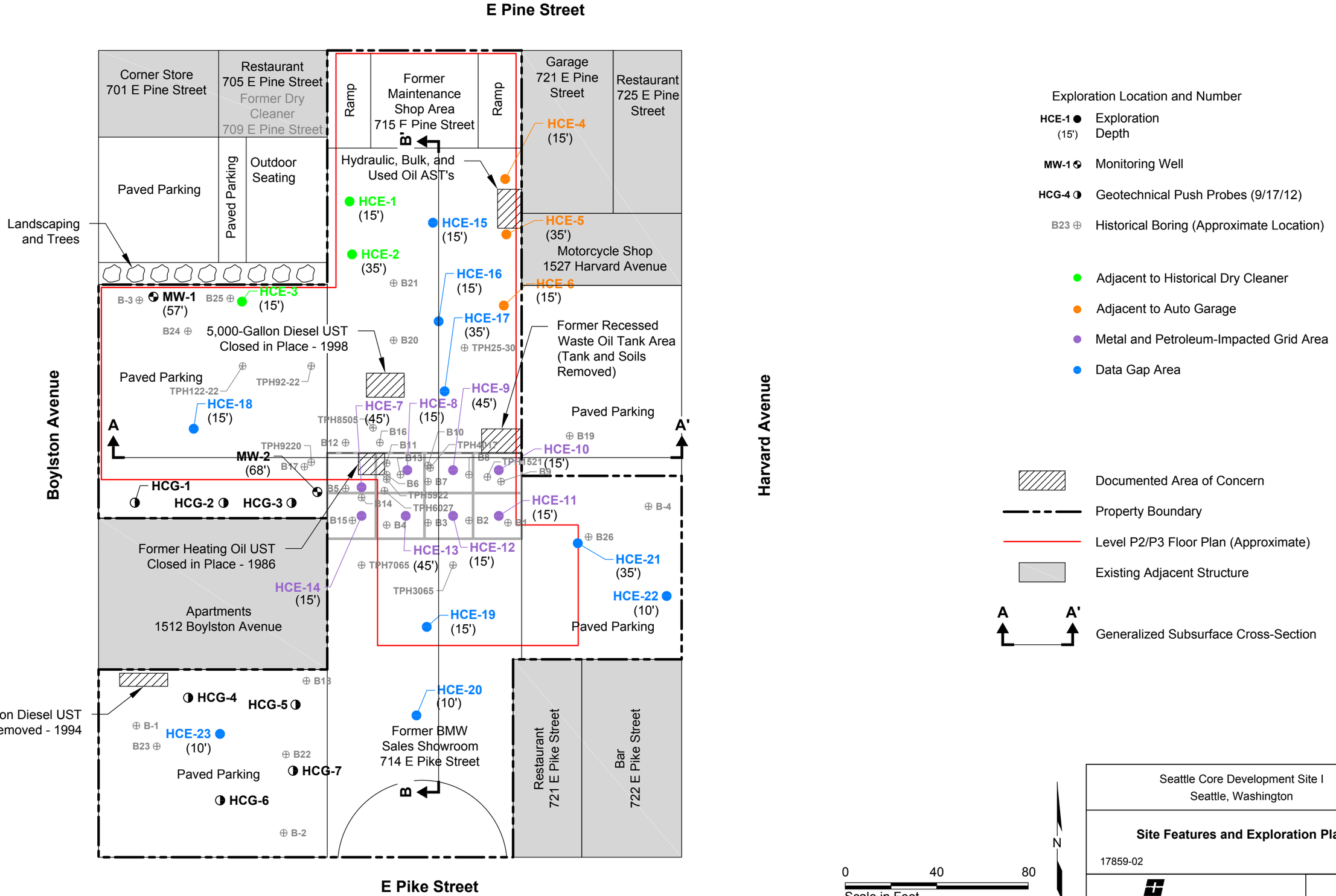

Seattle Core Development Site I
Seattle, Washington

Site Features and Exploration Plan

17859-02 1/13

HARTCROWSER

Figure
2

EAL 01/10/13 1785902-006.dwg

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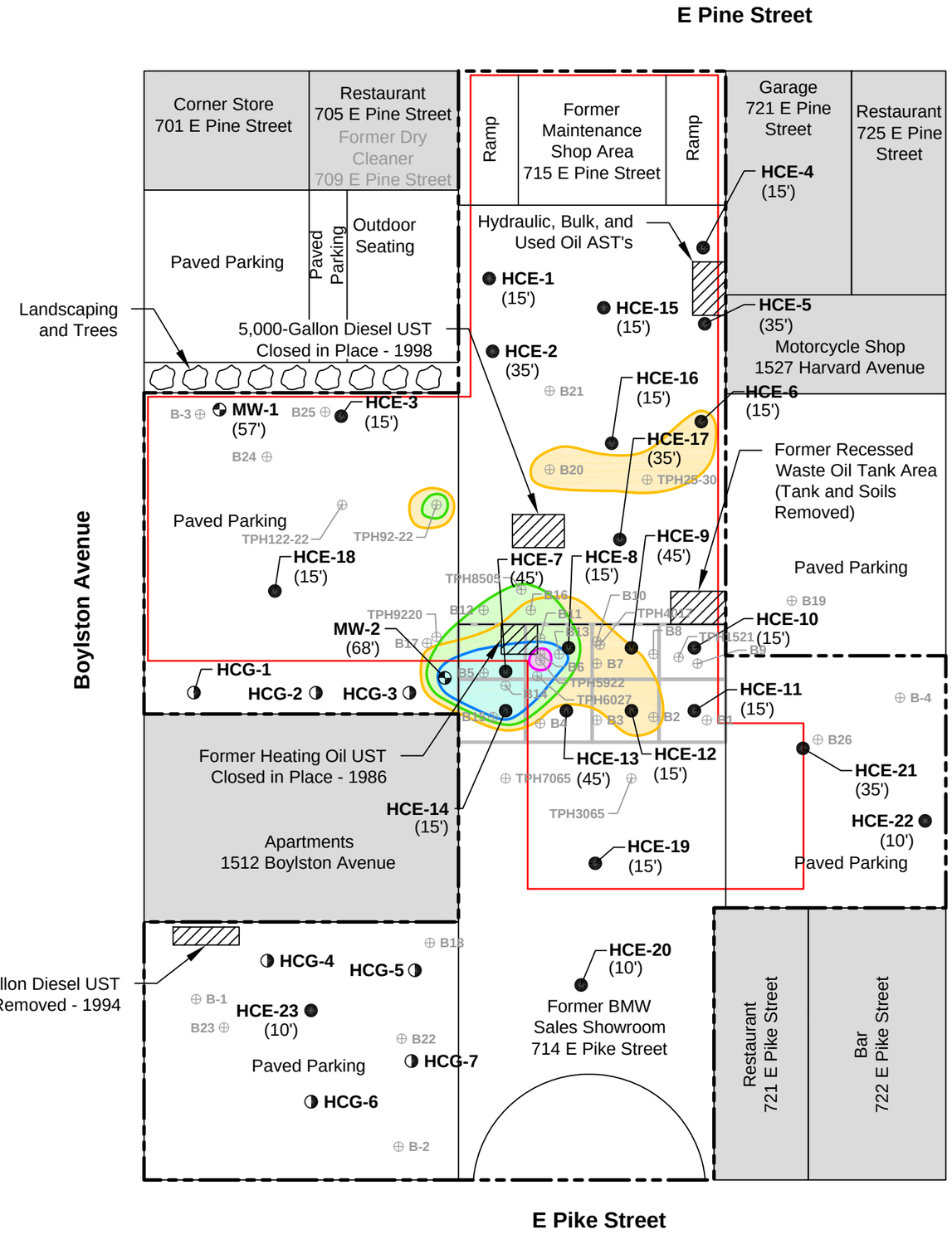

Exploration Location and Number

HCE-1 (15') Exploration Depth

MW-1 Monitoring Well

HCG-4 Geotechnical Push Probes (9/17/12)

B23 Historical Boring (Approximate Location)

Documented Area of Concern

Property Boundary

Level P2/P3 Floor Plan (Approximate)

Existing Adjacent Structure

Approximate Area of TPH Impacts from 0-10' Depth Range

Approximate Area of TPH Impacts from 10-20' Depth Range

Approximate Area of TPH Impacts from 20-30' Depth Range

Approximate Area of TPH Impacts from 30-40' Depth Range

Note: **TPH impacts include soils with TPH concentrations above MTCA Method A cleanup levels.**

0 40 80

Scale in Feet

N

Seattle Core Development Site I

Seattle, Washington

TPH Impacts in Soil

17859-02 1/13

HARTCROWSER

Figure **3**

JAB 01/29/13 1785902-010.dwg

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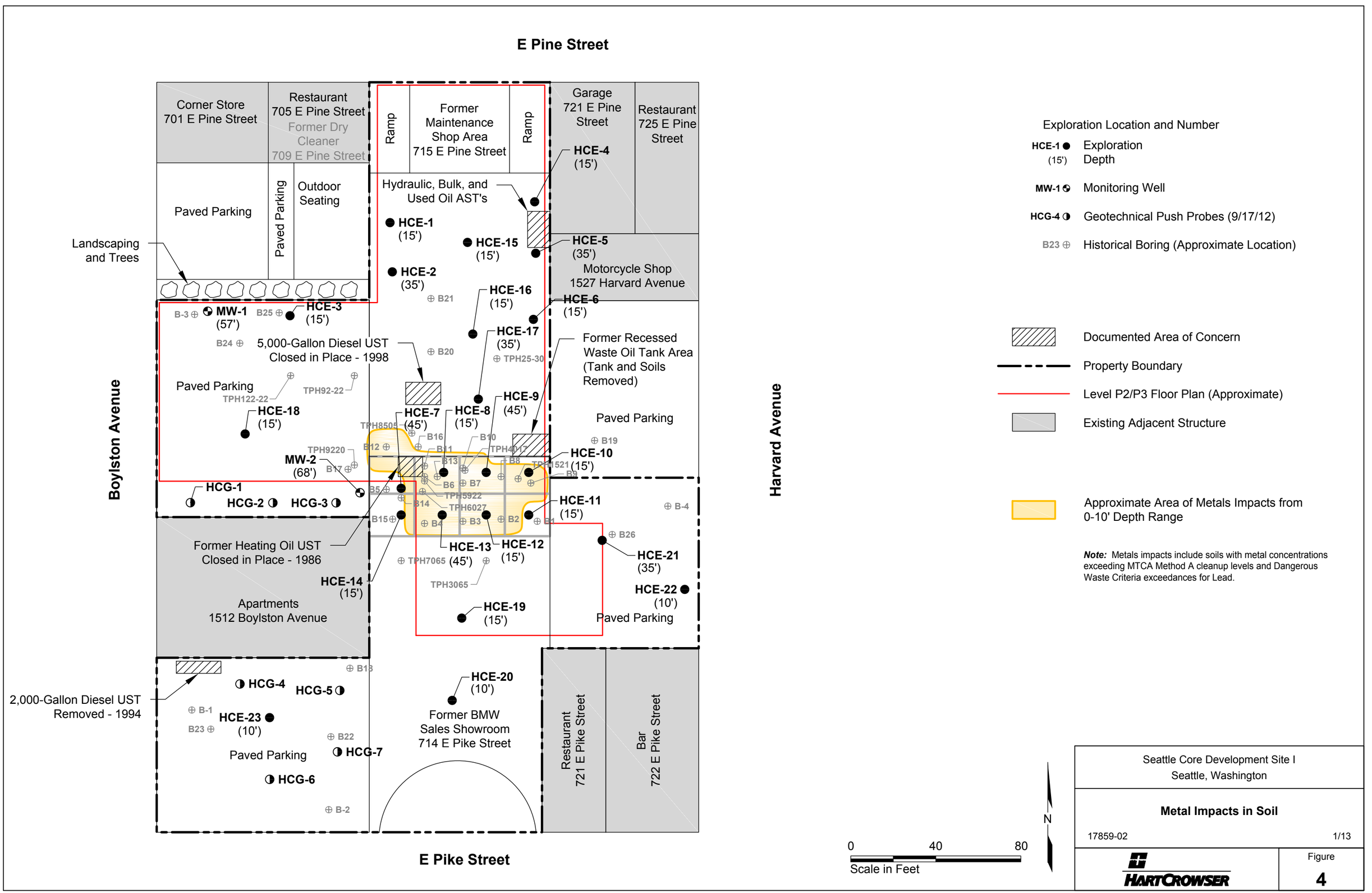

Seattle Core Development Site I
Seattle, Washington

Metal Impacts in Soil

17859-02 1/13

HARTCROWSER

Figure
4

EAL 01/10/13 1785902-008.dwg

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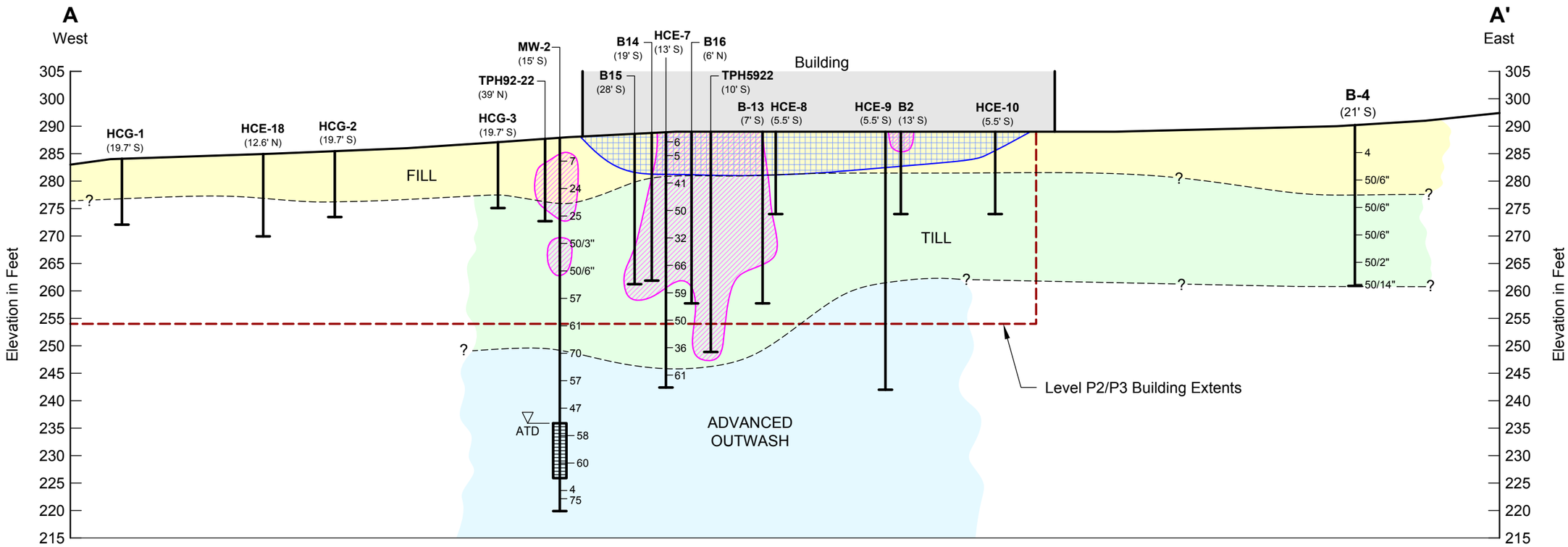

MW-2
(15' S)

Exploration Number
(Offset Distance and Direction)

Exploration Location

ATD — Water Level

25 — Standard Penetration Resistance
in Blows per Foot

Screened Interval

Bottom of Boring

Approximate Area of TPH Impacts (Detections Above MTCA Method A Cleanup Levels)

Approximate Area of Metal Impacts (Above MTCA Method A Cleanup Levels)

0 20 40
Scale in Feet

Notes:

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

2. Contaminant impact boundaries are based upon interpolation of historical and current soil chemical results.

Seattle Core Development Site I
Seattle, Washington

Generalized Subsurface Cross Section A-A'

17859-02 1/13

HARTCROWSER

Figure
5

JAB 01/18/13 1785902-011.dwg

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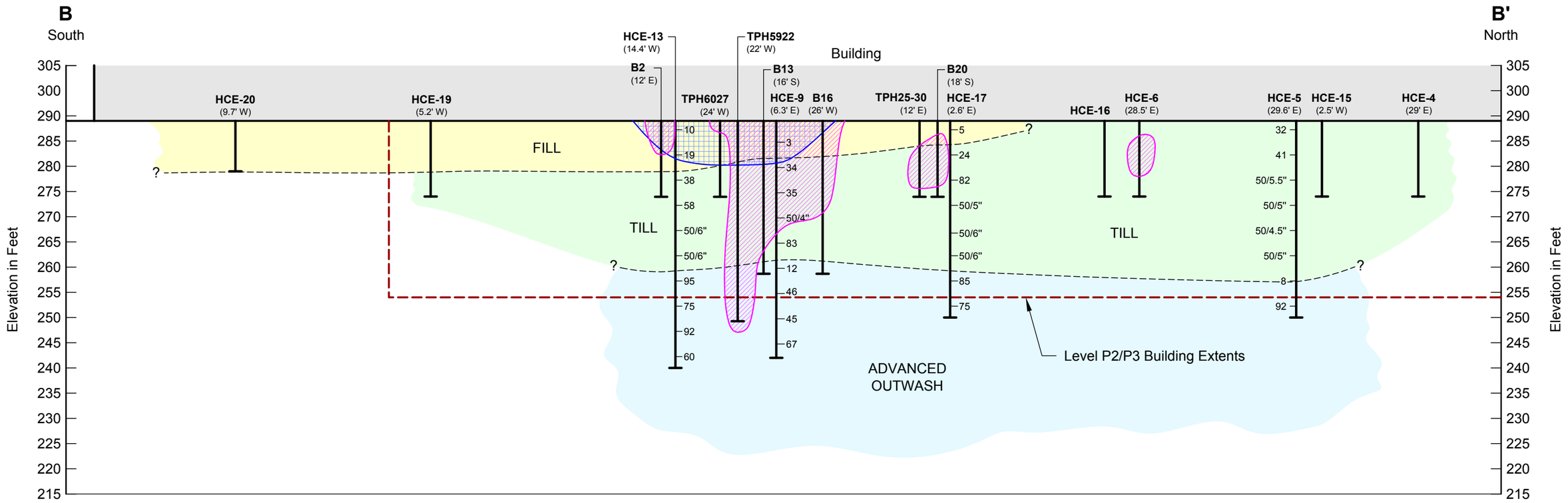

HCE-13 (14.4' W) — Exploration Number (Offset Distance and Direction)

Exploration Location

10 — Standard Penetration Resistance in Blows per Foot

Bottom of Boring

Approximate Area of TPH Impacts (Detections Above MTCA Method A Cleanup Levels)

Approximate Area of Metal Impacts (Above MTCA Method A Cleanup Levels)

0 20 40
Scale in Feet

Notes:

1. Contacts between soil units are based upon interpolation between borings and represent our interpretation of subsurface conditions based on currently available data.
2. Contaminant impact boundaries are based upon interpolation of historical and current soil chemical results.

Seattle Core Development Site I
Seattle, Washington

Generalized Subsurface Cross Section B-B'

17859-02 1/13

HARTCROWSER

Figure 6

JAB 01/18/13 1785902-011.dwg

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APPENDIX A
NO FURTHER ACTION AND RESTRICTIVE COVENANT 1999

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

January 25, 1999

NFA

Richard Truax, P.E.
RETEC
1011 SW Klickitat Way
Suite 207
Seattle, WA 98314-1162

RE: Independent Remedial Action
BMW Seattle, 714 E. Pike St., Seattle, WA

Dear Mr. Truax:

Thank you for submitting the results of your independent remedial action(s) for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information for Parcel "A" and "B" located at BMW Seattle, 714 E. Pike St.:

"Site Risk Assessment and Request for No-Further-Action Approval, BMW Seattle", August 18, 1998. Prepared by Richard Truax, P.E. and Jill Nordstrom of RETEC.

The report(s) listed above will be kept in the Central Files of the Northwest Regional Office (NWRO) of Ecology for review by appointment only. Appointments can be made by calling Sally Perkins at the NWRO at (425) 649-7190.

Based upon the information in the reports listed above, Ecology has determined that, at this time, the release of diesel fuel, lead and cadmium into the soil no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology

In addition, a copy of the attached Restrictive Covenant (with noted changes on page 2 of the covenant incorporated) on the property must be filed with King County within 8 weeks of the date of this letter to maintain Ecology's no further action determination. This no further action determination automatically terminates if Ecology does not receive a filed copy of the Restrictive Covenant dated within 8 weeks of the date of this letter. In addition, the NFA determination will have no force and effect if any portion of the Restrictive Covenant is violated. WAC 173-340-440(6) requires you to notify and seek comment from a city or county department with land use planning authority for real property subject to the Restrictive Covenant.

Ecology's no further action determination is made only with respect to the release identified in the report(s) listed above. This no further action determination applies only to the area of the property affected by the release identified in the report at BMW Seattle, 714 E. Pike St..

It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by Seattle BMW.

Ecology will update its database to reflect this "No Further Action" determination. Your site will not appear in future publications of the Confirmed & Suspected Contaminated Sites Report (previously known as the Affected Media and Contaminants Report.)

Ecology will update its Leaking Underground Storage Tank database to reflect this "No Further Action" determination. Your site will not appear in future publications of the LUST database.

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have any questions, please contact Lydia Lindwall at (360) 407-7205, or Dan Cargill at (425) 649-7023.

Sincerely,

Charles San Juan
Toxics Cleanup Program

LL:csj
Enclosures

cc: John C. Bjorkman, Preston Gates & Ellis
Dan Cargill, TCP NWRO

RESTRICTIVE COVENANT

Norman Enterprises, Inc., 714 E. Pike and 715 E. Pine.

This Declaration of restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and WAC 713-340-440 by Norman Enterprises, Inc., its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the Risk Assessment (RETEC April 1998) and Remedial Action letter (_____ __, 1998) both of which are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of total petroleum hydrocarbons, lead and cadmium which may exceed the Model Toxics Control Act Cleanup Level for soil established under WAC 173-340-740.

The undersigned, Norman enterprises, Inc., is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described:

Parcel A:

Lots 8 and 9 and the south half of lots 10 and 11, Block 4, Supplementary Plat of Union Addition to the City of Seattle, according to the plat thereof recorded in Volume 9 of Plats, page 12, records of King County, Washington.

Parcel B:

The north half of lots 10 and 11 and all of lots 12 an 13, Block 4, Supplementary Plat of Union Addition to the City of Seattle, according to the plat thereof recorded in Volume 9 of Plats, page 12, records of King County, Washington.

Norman Enterprises, Inc. makes the following declarations as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Return To:
PRESTON GATES & ELLIS LLP
701 Fifth Avenue
Suite 5000
Seattle, WA 98104-7078
Attn: John C. Bjorkman

RESTRICTIVE COVENANT:

Grantor: Norman Enterprises, Inc., its successors and assigns

Grantee: State of Washington, Department of Ecology, its successors and assigns

Legal Description:
Abbreviated form: 714 East Pine Street and 715 East Pine Street
Seattle, King County, Washington
Additional legal on page 1 of document

Assessor's Property Tax Parcel Account Number(s):
880490-0215-03 and 880490-0230-04, respectively

Reference number(s) of documents being assigned or released and related documents:
(Additional on page _____ of document)

DATED this ___ day of _____, 1998.

NORMAN ENTERPRISES, INC.

By _____
Stephen F. Norman, President

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Stephen F. Norman is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument, and acknowledged it as the President of Norman enterprises, Inc. to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

GIVEN under my hand and official seal hereto affixed the date and year in this certificate first above written.

_____
Signature of Notary Public

_____
Typed Name of Notary Public
Residing at _____
My Commission Expires: _____
SIGNATURE AND SEAL MUST BE COMPLETELY WITHIN THE BORDERS OF THIS DOCUMENT

Section 1. A portion of the Property contains total petroleum hydrocarbons (diesel), lead, and cadmium contaminated soil. The contaminated soil is located under the northern portion of parcel A and the southern portion of parcel B, that is, the portions contiguous to each other and the center of the building now existing on the two parcels. Any alteration, modification, or removal of the existing structure, resulting in excavation or removal of, contaminated soil shall be performed consistent with all applicable statutory and regulatory requirements then in existence.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited without prior written notice to Ecology.

Section 3. The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property.

Section 4. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 5. The Owner must notify Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant.

Section 6. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 7. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology concurs.

APPENDIX B
FIELD EXPLORATION METHODS AND PUSH PROBE, BORING, AND WELL LOGS

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for double-sided printing.

APPENDIX B
FIELD EXPLORATION METHODS, AND PUSH PROBE, BORING, AND WELL LOGS

This appendix describes the field explorations methods we used to advance explorations, and to conduct soil groundwater sampling, and to field screen the soils for sheen and headspace vapor. We also include the push probe, boring, and well logs at the end of this appendix.

General Field Activities

Soil Exploration Activities and Characterization

Push probe explorations were completed at 16 locations on October 29 and 30, 2012. Hollow-stem auger explorations were completed at seven locations on November 12 and 13, 2012. Monitoring wells were completed at two locations on November 15 and 16, 2012. The soil exploration and well locations are shown on Figure 2.

The probe, boring, and well locations were located and marked in the field by a Hart Crowser field representative. We contracted with a private utility locating contractor to search for potential utilities at the proposed probe locations.

The push probe explorations were advanced to approximate depths of 16 feet below ground surface with a truck-mounted rig or a track-mounted rig for areas with limited access. One to two Hart Crowser field representatives supervised the probing and soil sampling activities. Soil samples were collected using a push probe acetate-lined sleeve sampler advanced by the push probe rig. Soil samples were collected in 4-foot-depth intervals and field screened at 2-foot-depth intervals.

The boring explorations were drilled to an approximate depth of 35 to 45 feet and the monitoring well explorations were drilled to 56.5 and 68 feet with a hollow-stem auger drill rig. One to two Hart Crowser field representatives supervised the drilling and soil sampling activities. Split-spoon soil samples were collected using a 1.5-inch-ID, split-spoon driven by a 140-pound auto hammer. Soil samples were collected and field screened at 5-foot-depth intervals.

Samples were classified in general accordance with ASTM Method D 2888 and were screened for potential soil contamination. Soil probe, boring, and well logs are presented on Figures B-2 through B-26 at the end of this appendix.

Soil Screening and Analysis

Field screening results were used as a general guideline to identify potential chemical constituents in soil samples.

Soil samples were field screened at 2- to 5-foot-depth intervals for evidence of TPH- and/or volatile organic compounds (VOCs)-related impacts using (1) visual and olfactory observations, (2) sheen screening, and (3) headspace vapor screening using a MultiRAE photoionization detector (PID). Field screening results were site-specific. The effectiveness of field screening varies with temperature, moisture content, organic content, soil type, and age of the constituents. Visual examination consists of inspecting the soil for stains indicative of impacts. Visual screening is generally more effective when impacts are related to heavy TPH hydrocarbons, such as motor or hydraulic oil, or when hydrocarbon concentrations are high.

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

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

Headspace vapor screening was intended to indicate the presence of volatile organic vapors and involved placing a 3- to 6-ounce soil sample in a pint size plastic sample bag. The plastic bag was shaken for several minutes to expose and volatilize the soil sample to the air captured in the plastic bag headspace. The probe of the PID was inserted into the bag and the instrument measured the concentration of organic vapors in the soil sample bag headspace. The highest vapor reading was recorded for each sample. The PID measures concentrations in ppm and is calibrated to isobutylene. The PID is typically designed to quantify

organic vapors concentrations in the range of 0 to 1,000 ppm. The presence or absence of a sheen or headspace vapors does not necessarily indicate the presence or absence of petroleum hydrocarbons. The results of field screening were recorded on the exploration logs on Figures B-2 through B-26 at the end of this appendix.

Well Installation Activities

Two monitoring wells were installed to assess groundwater quality at the Boylston property. The monitoring wells were installed on November 15 and 16, 2012.

The boreholes for the wells were drilled using hollow-stem auger. Two-inch-diameter Schedule 40 PVC riser pipe and 2-inch-diameter 0.020-inch machine-slotted screen were used for the well casings and screens. The well screen and casing riser were lowered down through the hollow-stem auger hole. As the auger was withdrawn, No. 10/20 silica sand was placed in the annular space from the base of the boring to approximately 2 feet above the top of the well screen.

Well seals were constructed by placing bentonite chips in the annular space on top of the filter sand to within 2 feet of ground surface. The remaining annular space was backfilled with concrete to complete the surface seal. For security, the monitoring wells were completed with locking stick-up steel monuments set in concrete. The monitoring well construction details are illustrated on the boring logs on Figures B-25 and B-26.

The monitoring wells were installed in accordance with Washington State Department of Ecology regulations.

Groundwater Sampling

Groundwater samples were collected from monitoring wells MW-1 and MW-2 on November 28, 2012, for chemical analysis.

Upon arrival at the wellhead, field personnel recorded conditions, depth to water and depth to sediment in the wells using a water level indicator. Prior to sampling, wells were purged and sampled using low-flow groundwater sampling techniques. Purging and sampling were conducted at a depth representing the middle of the screened interval of each well. Groundwater samples were collected once the field parameters of pH, specific conductivity, and temperature were stabilized. The sample bottles were filled directly from the polyethylene tubing at relatively low-flow rates. To prevent cross-contamination

of the wells, disposable polyethylene tubing was used for each groundwater sample and the water level indicator and pump was decontaminated between well locations using a non-phosphate-based cleaner and de-ionized water.

Sample Handling and Laboratory Analysis

Soil and groundwater samples collected during the Phase II sampling event were submitted to Advanced Analytical Laboratory of Redmond, Washington, for chemical analysis. Samples were delivered by courier to the laboratory under chain of custody protocols.

Investigation-Derived Waste (IDW) Storage and Disposal

Soil cuttings and water generated during exploration activities and groundwater sampling were placed into separate labeled drums, sampled, and left on site, pending analysis of drum contents. IDW disposal will be managed by Hart Crowser as part of the drill spoils and purge water disposal.

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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 (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				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
	SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE)	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
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE)	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
	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

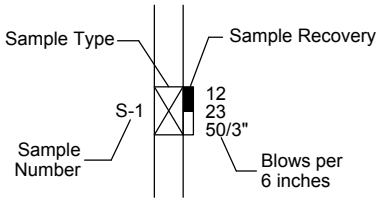
Laboratory Test Symbols

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

17859-02 *10/12*

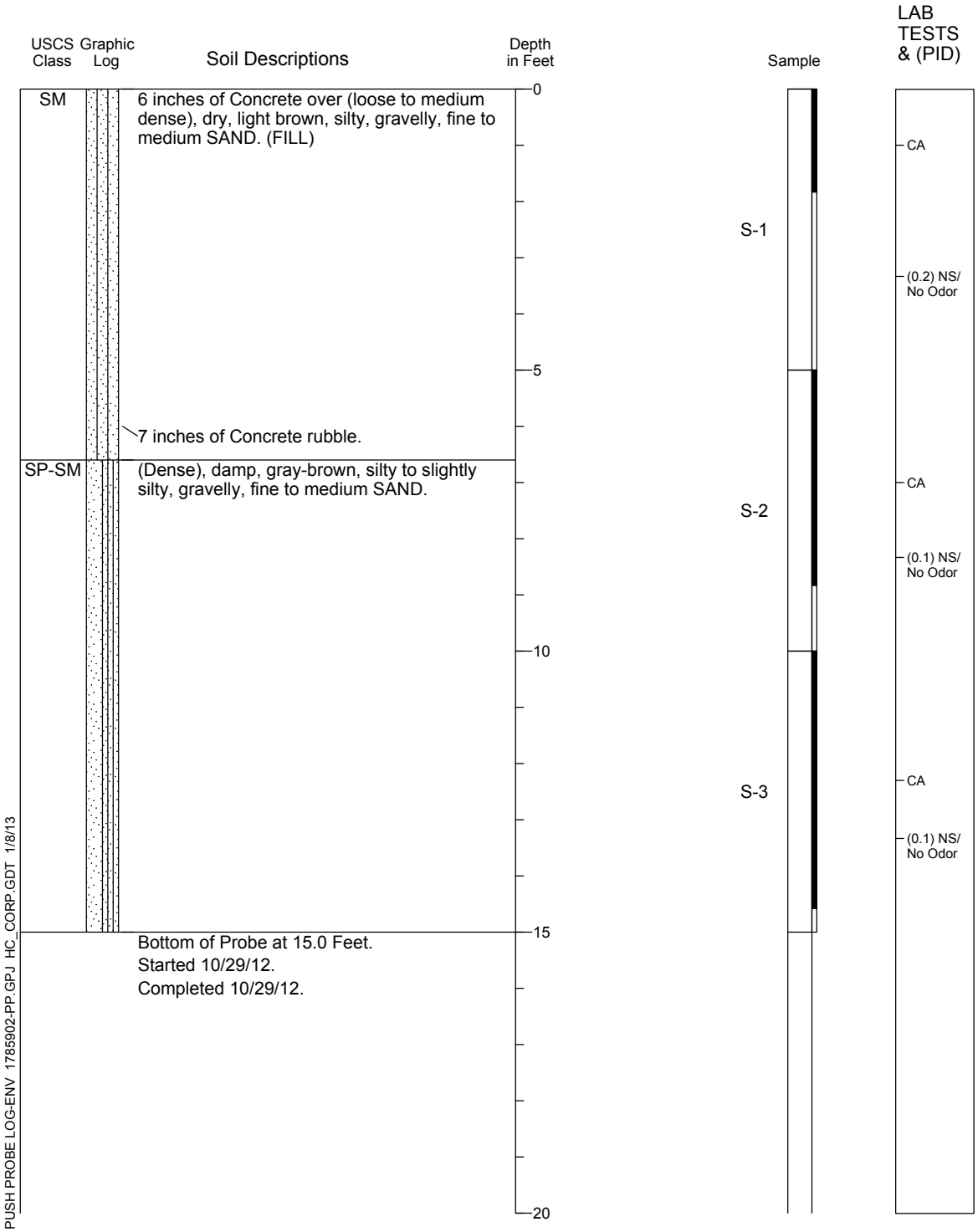
Figure B-1

KEY SHEET 1785902-PP.GPJ HC_CORP.GDT 1/8/13

Push Probe Log HCE-1

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

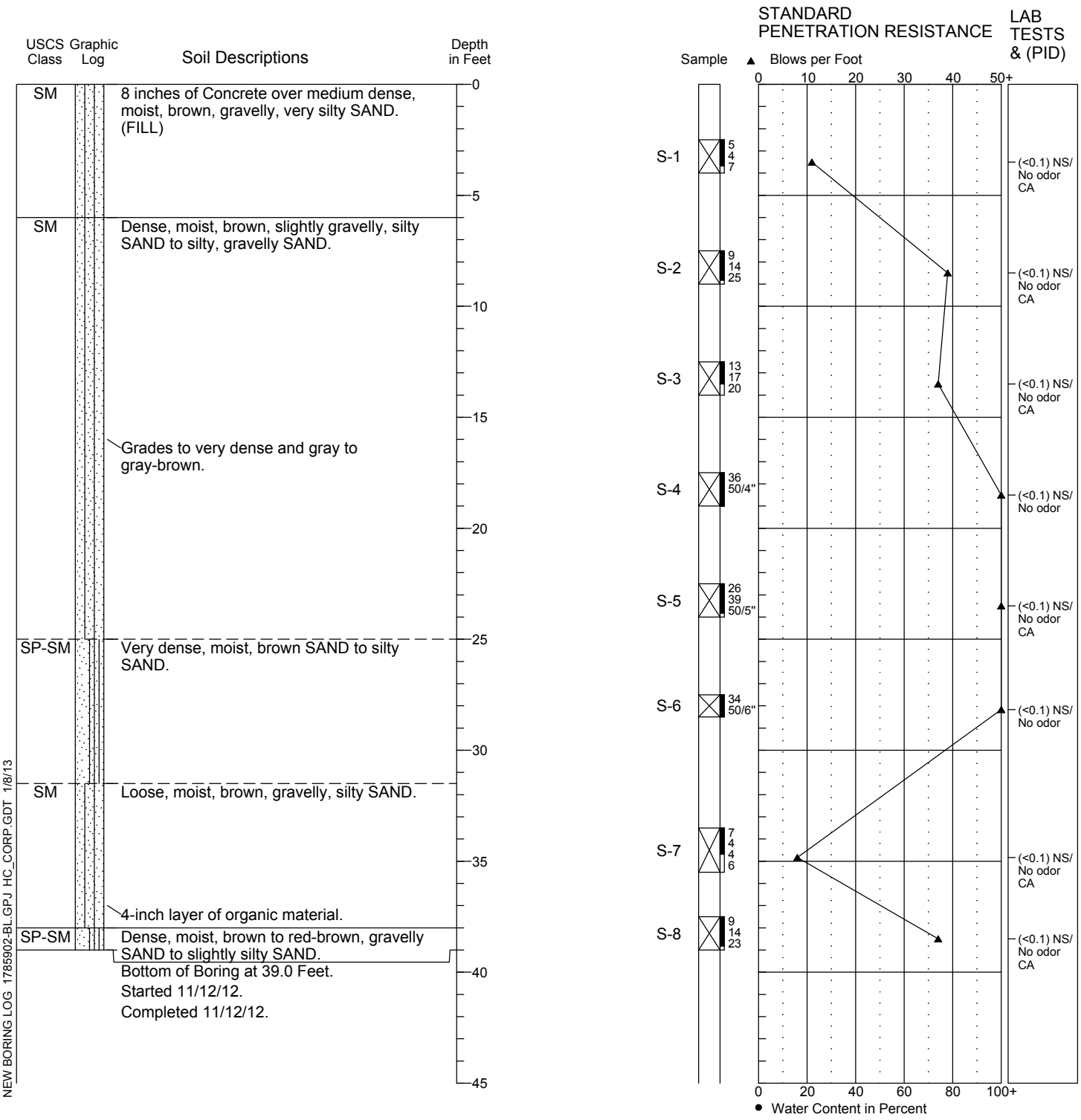
17859-02 ***10/12***

Figure B-2

Boring Log HCE-2

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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.

HARTCROWSER

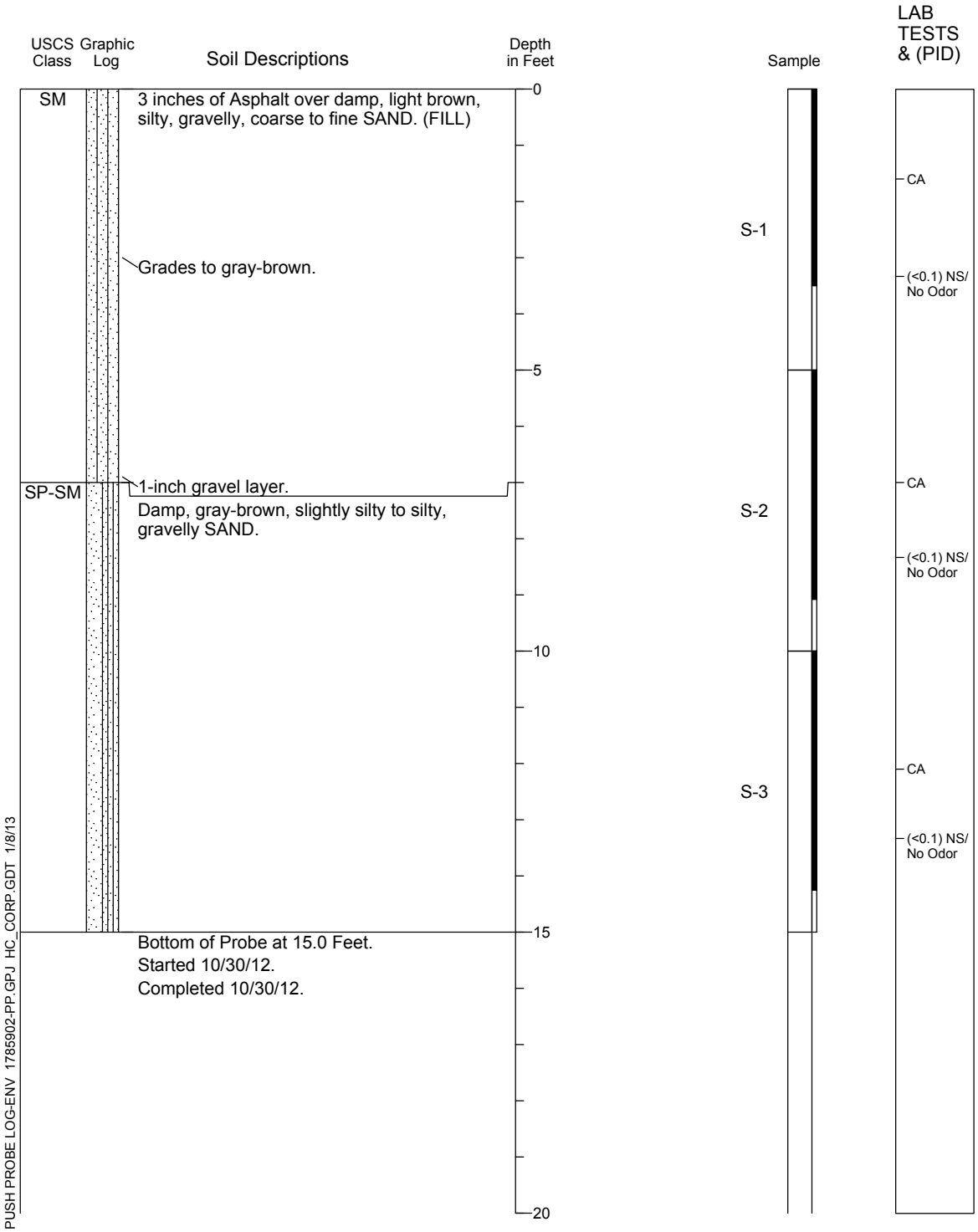
17859-02 *11/12*

Figure B-3

Push Probe Log HCE-3

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

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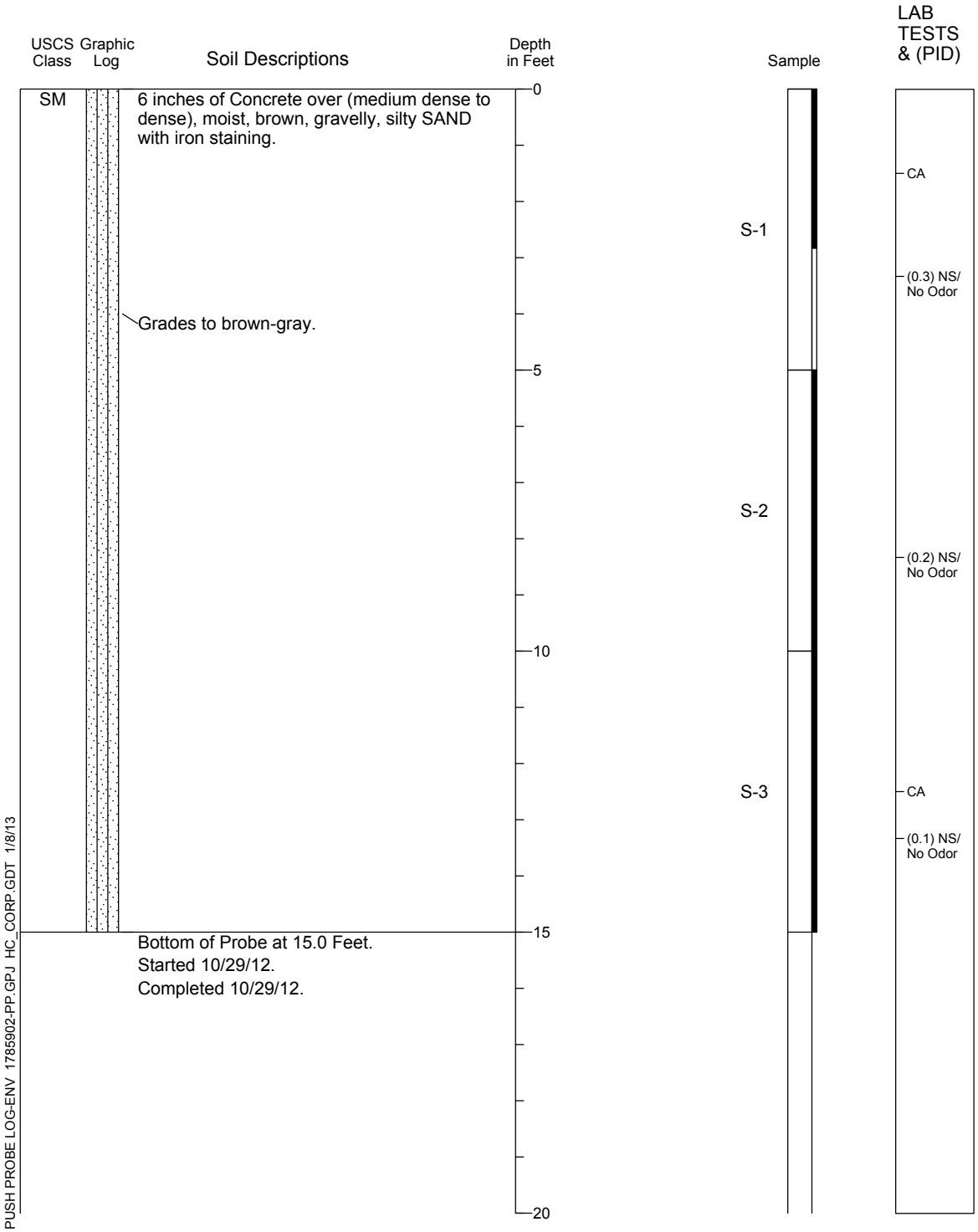
Figure B-4

Push Probe Log HCE-4

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

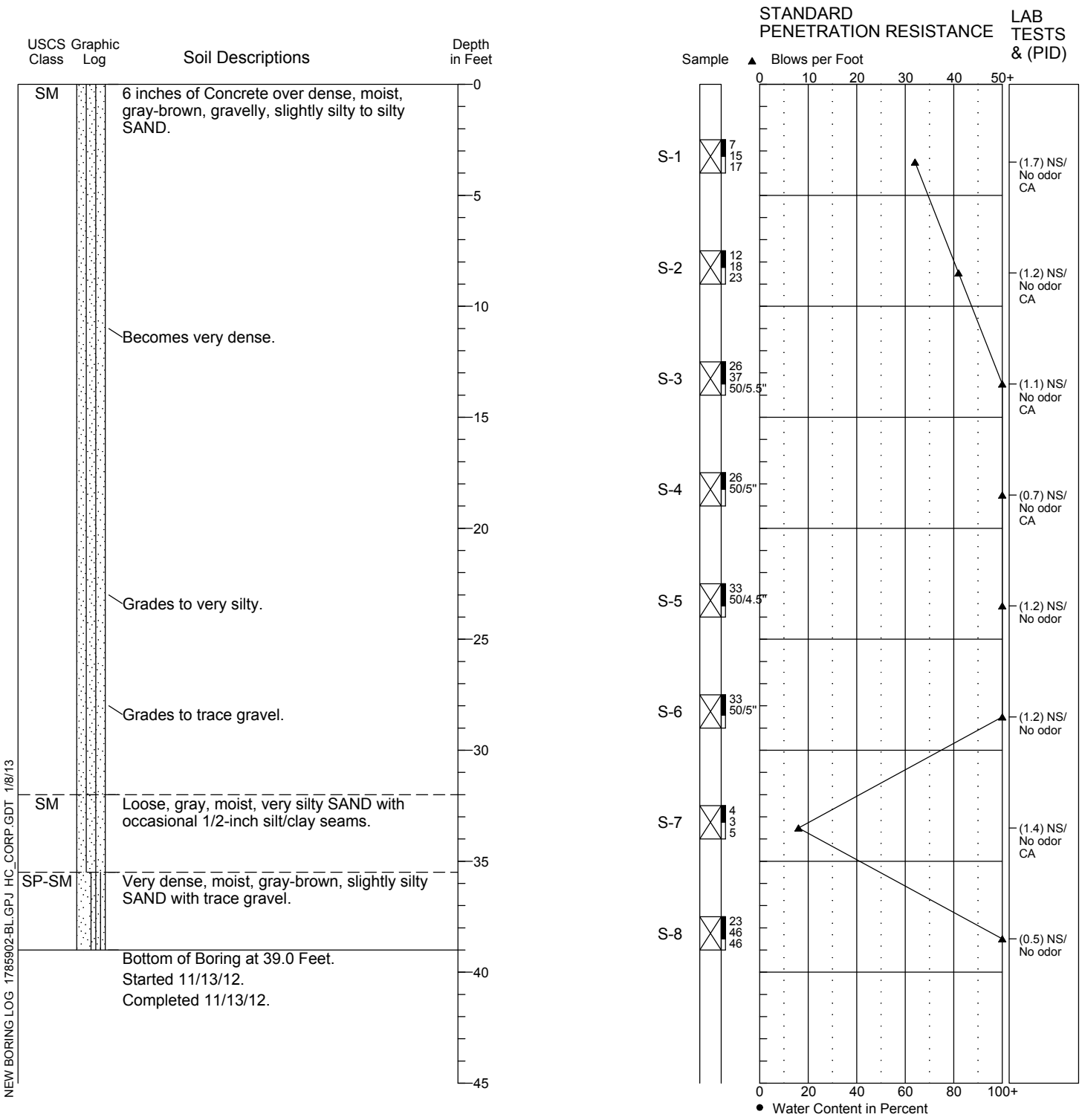
17859-02 *10/12*

Figure B-5

Boring Log HCE-5

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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.

HARTCROWSER

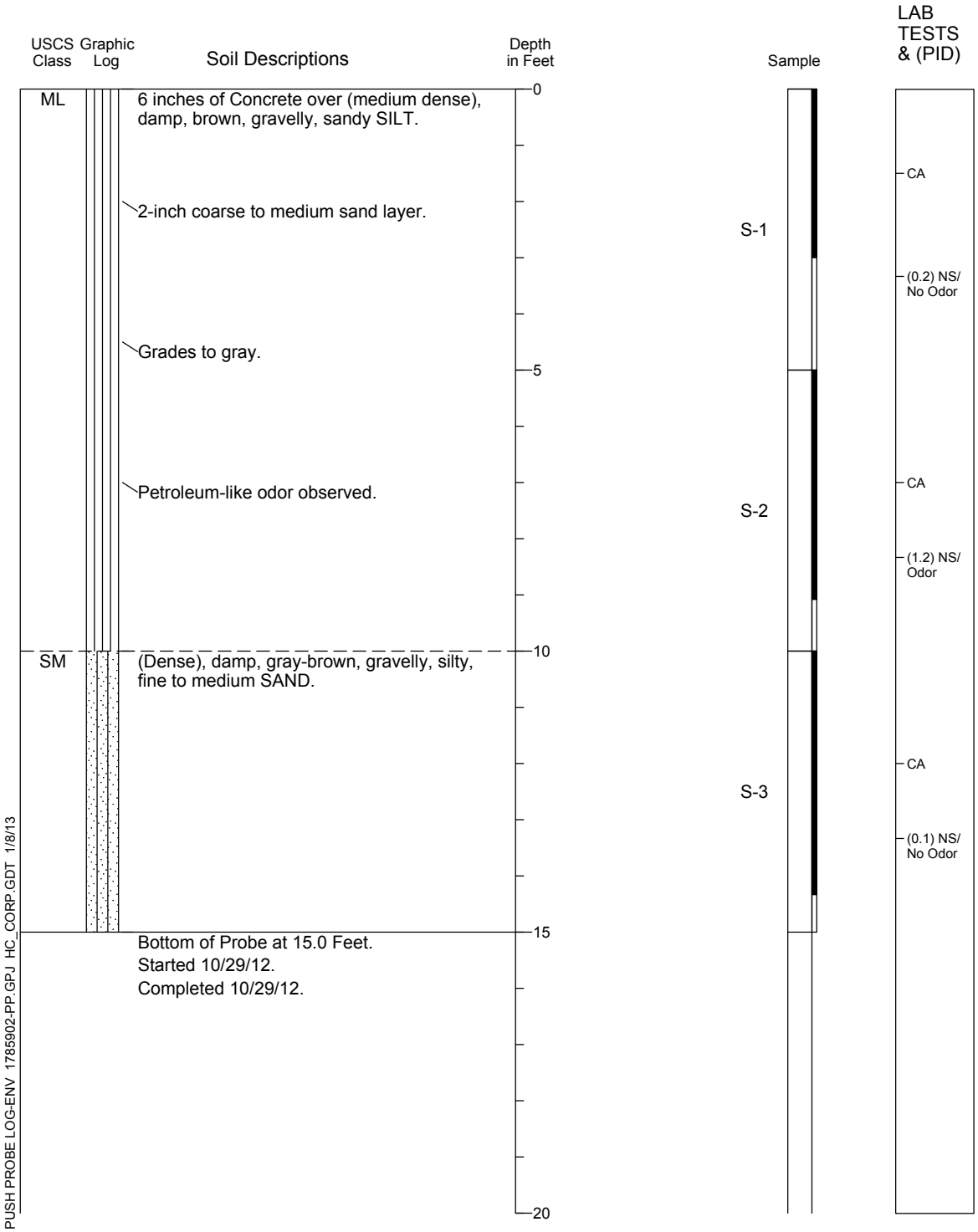
17859-02 ***11/12***

Figure B-6

Push Probe Log HCE-6

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

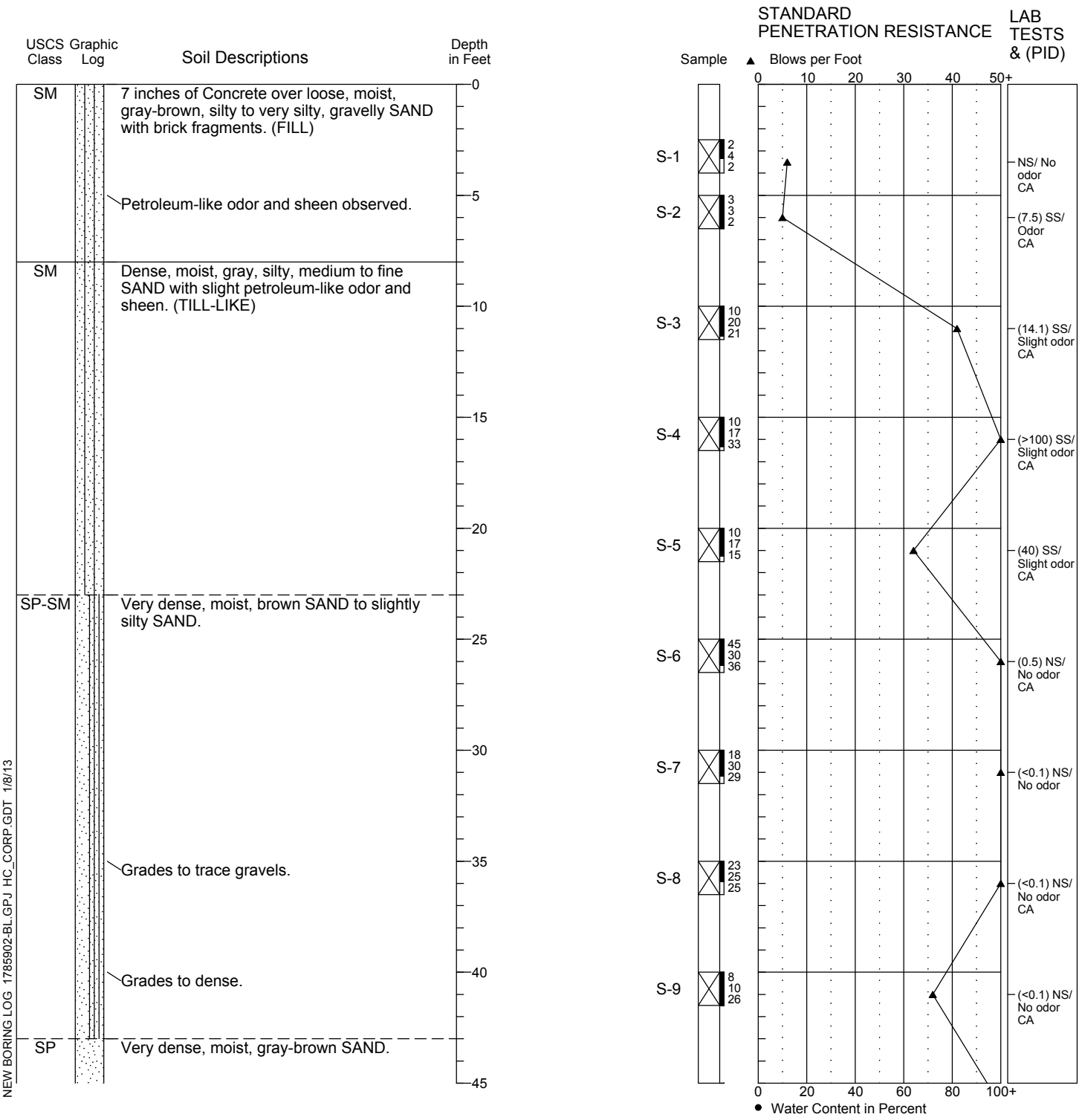
17859-02 *10/12*

Figure B-7

Boring Log HCE-7

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Limited Access Rig
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: B. McDonald Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

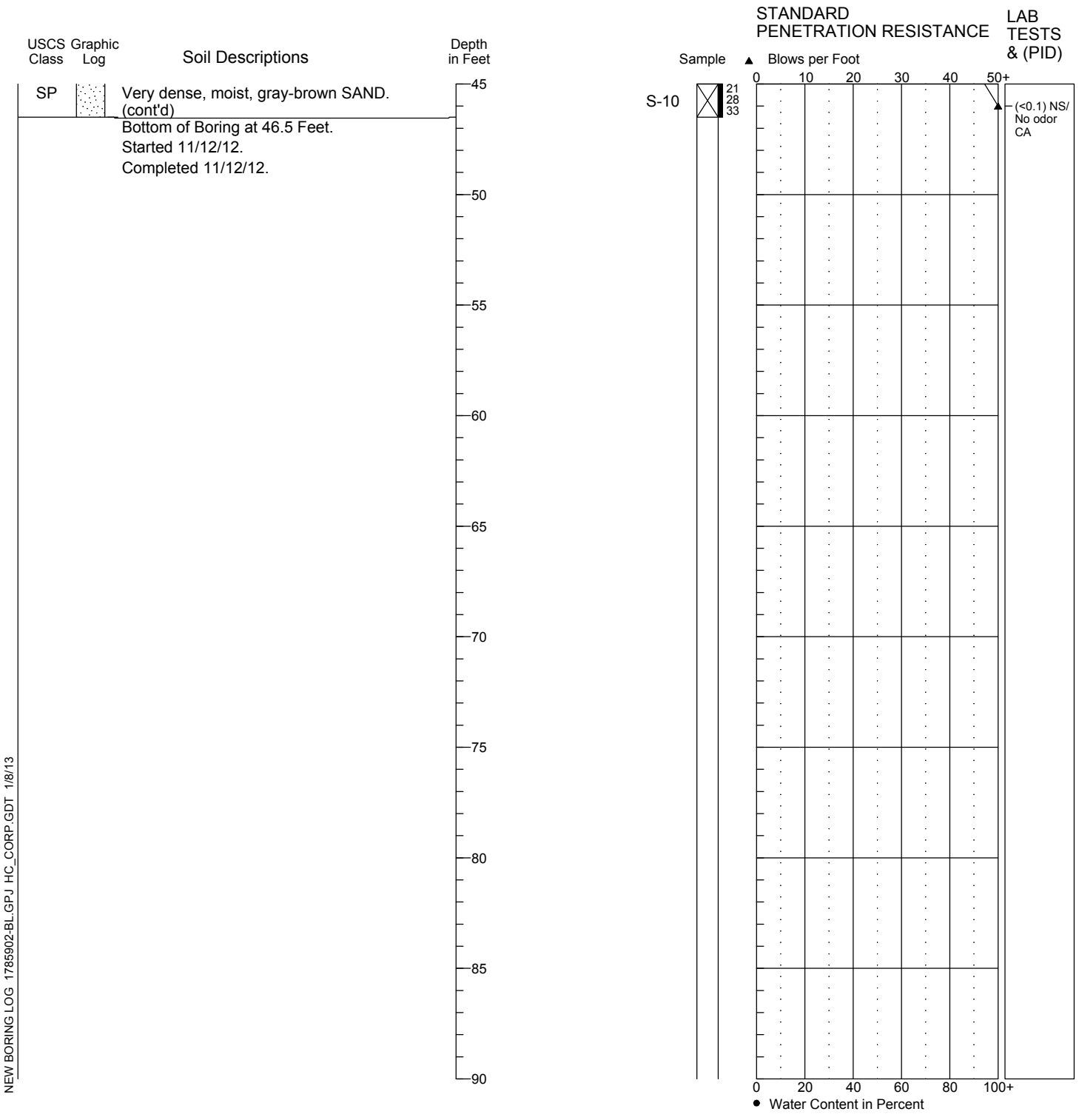
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

Boring Log HCE-7

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Limited Access Rig
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: B. McDonald Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

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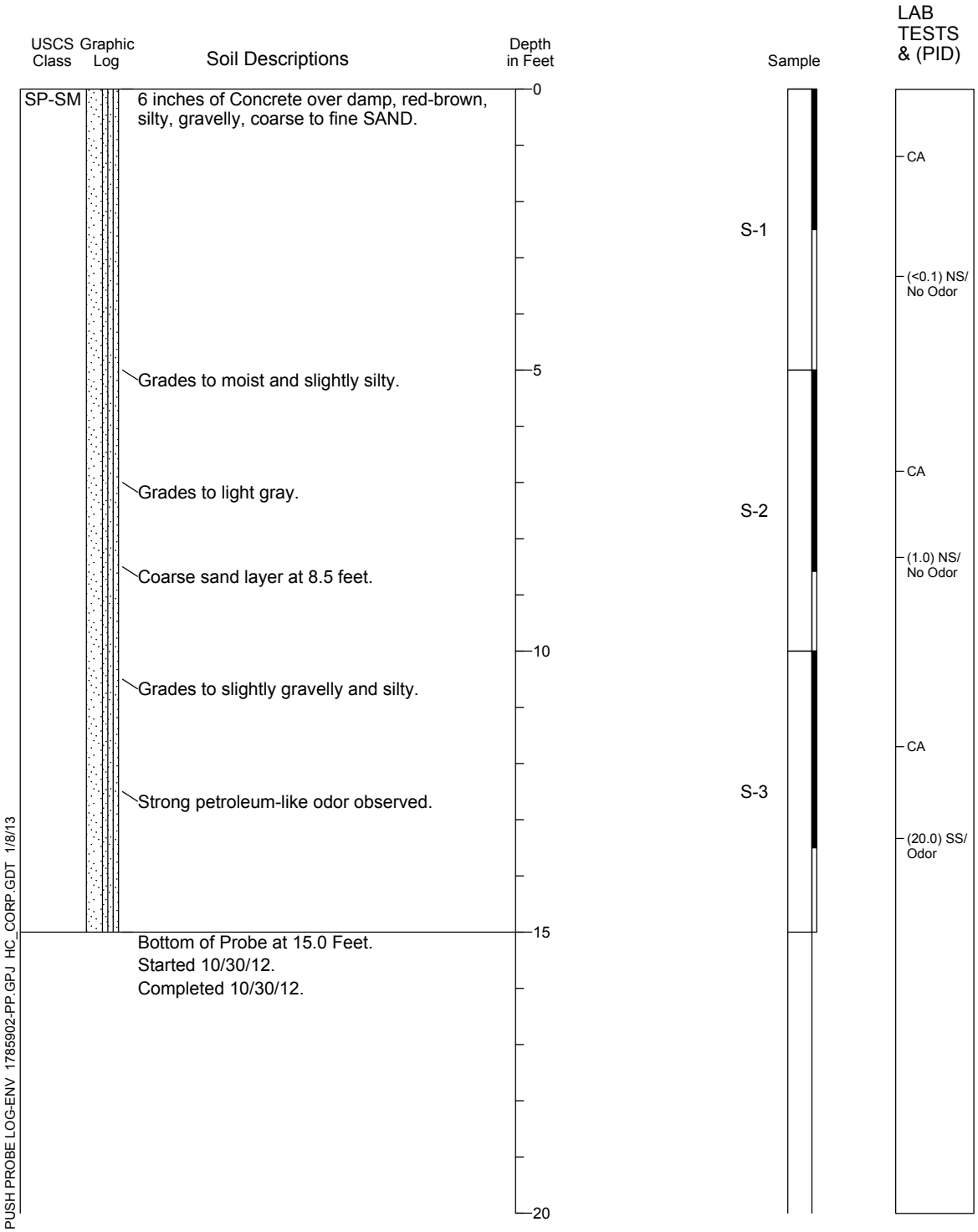
HARTCROWSER

17859-02 ***11/12***
Figure B-8 ***2/2***

Push Probe Log HCE-8

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
5. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

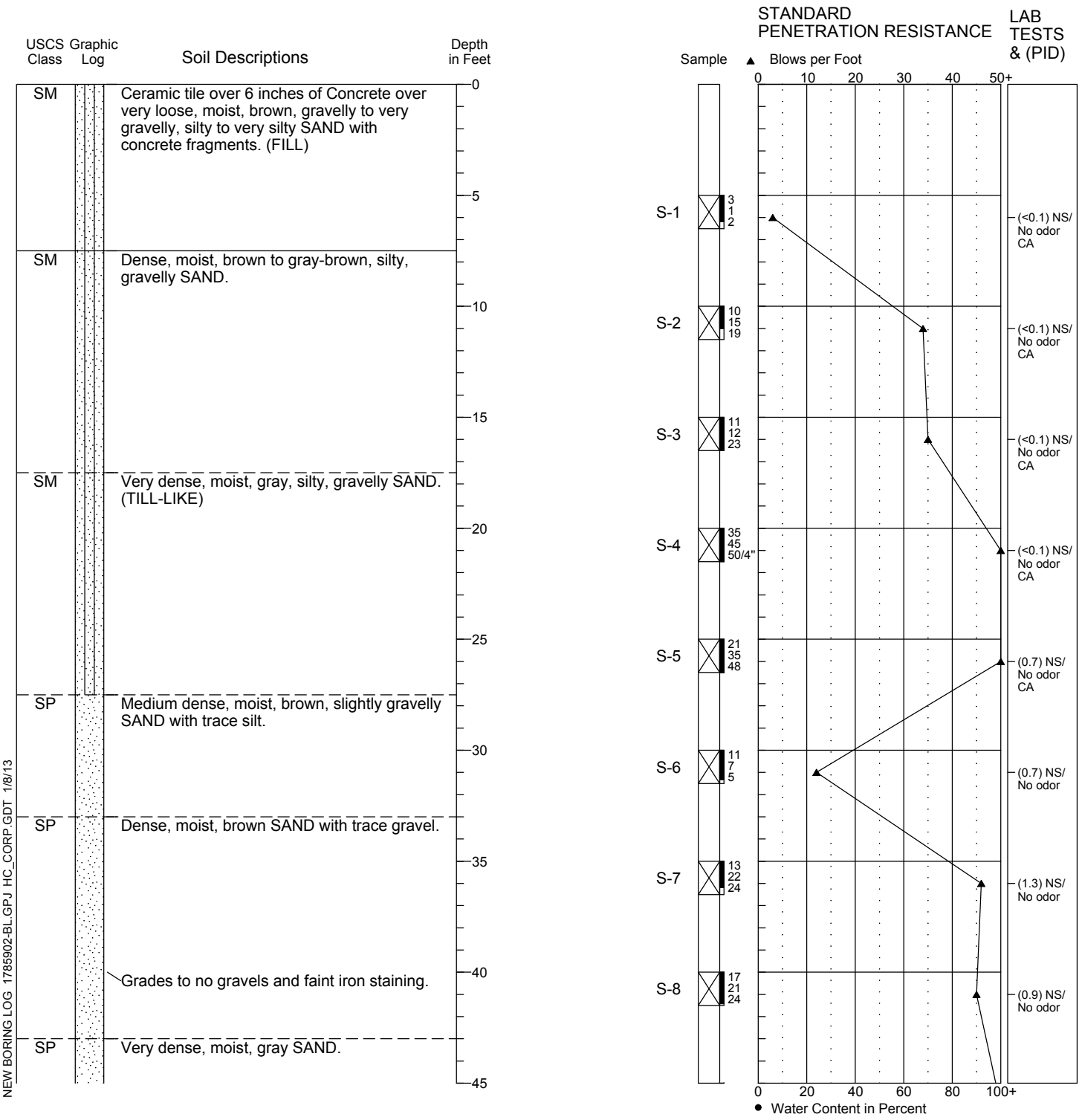
17859-02 *10/12*

Figure B-9

Boring Log HCE-9

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Limited Access Rig
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

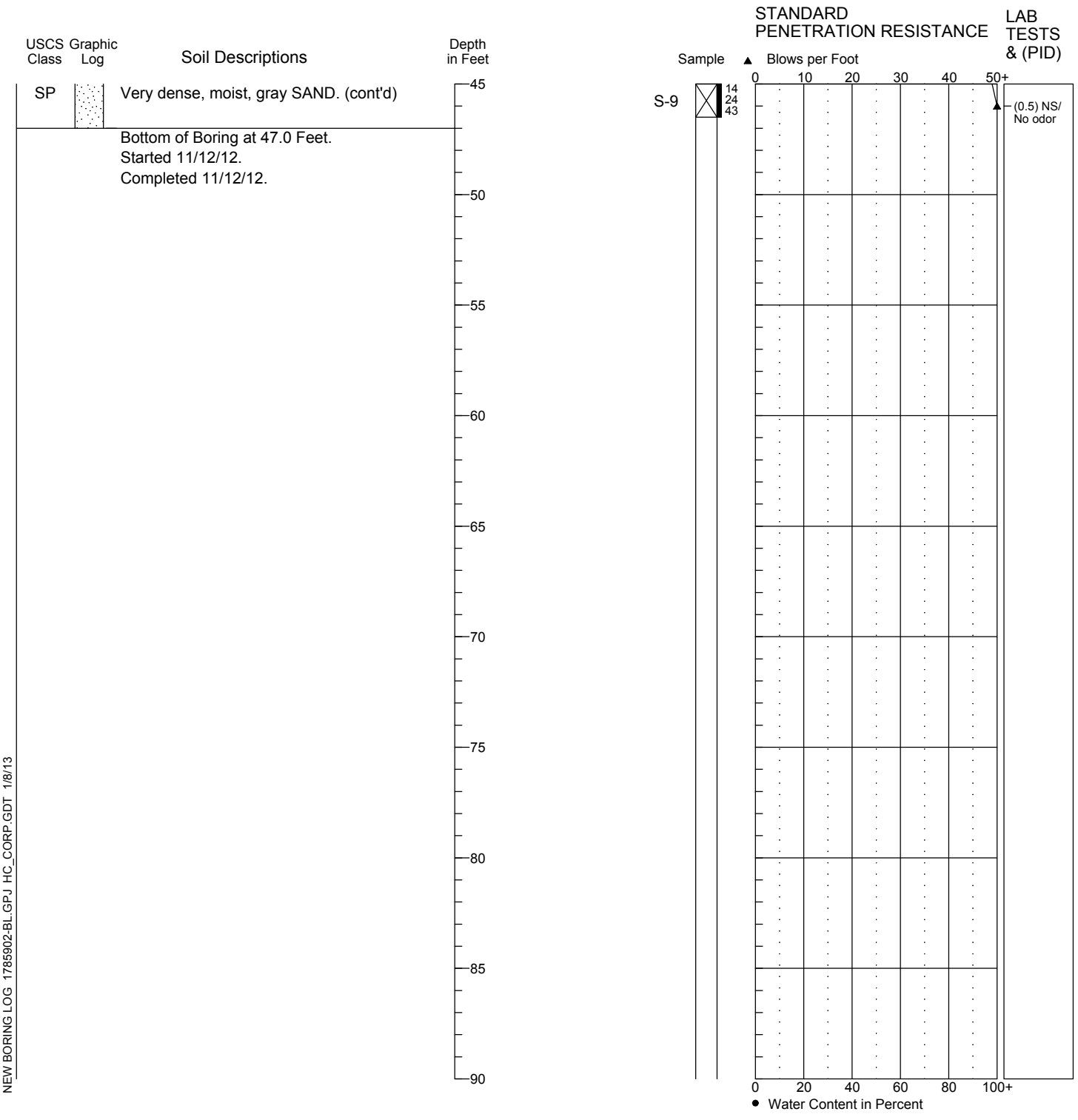
HARTCROWSER

17859-02 *11/12*
Figure B-10 *1/2*

Boring Log HCE-9

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Limited Access Rig
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

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2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
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4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

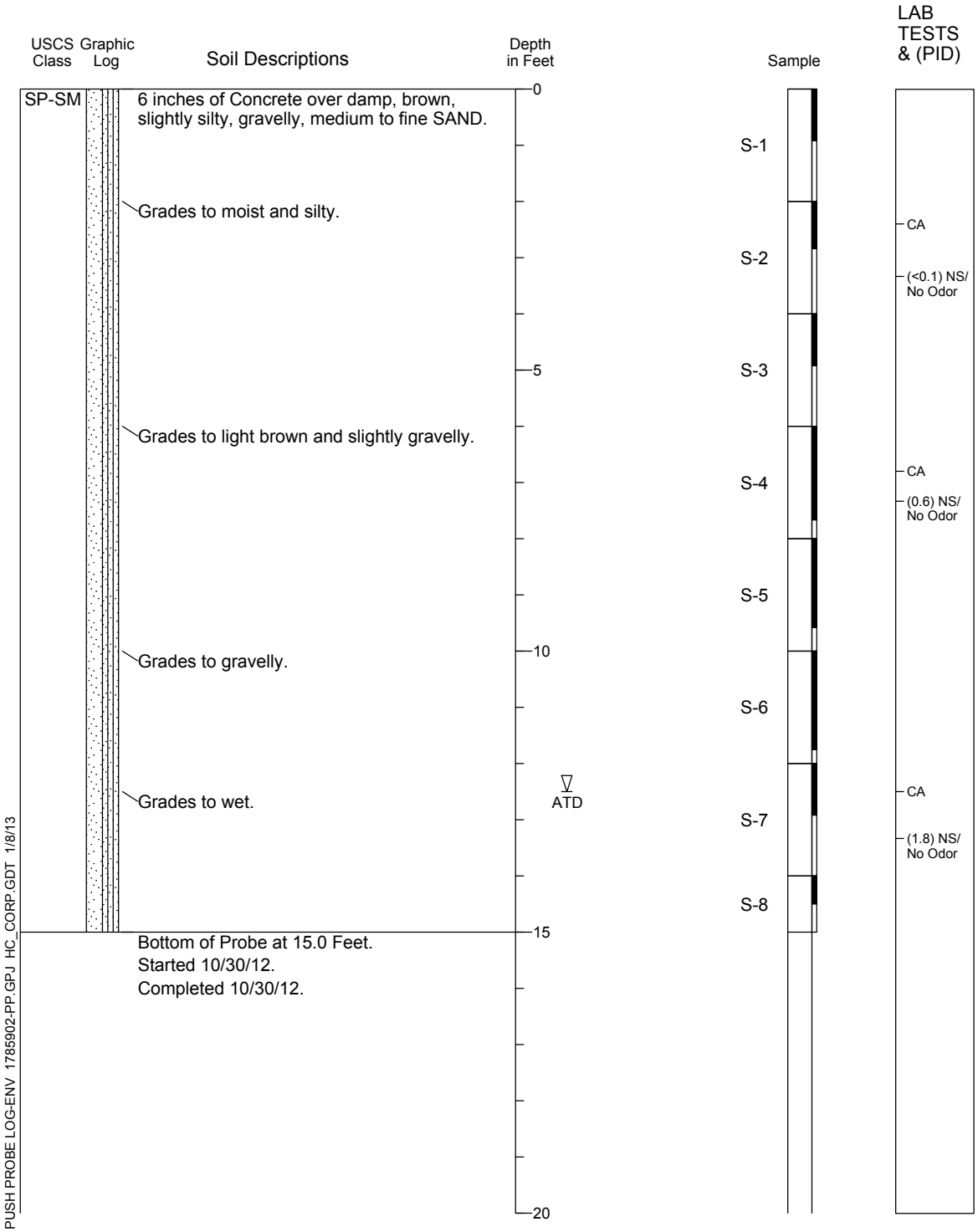
17859-02 ***11/12***

Figure B-10 ***2/2***

Push Probe Log HCE-10

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

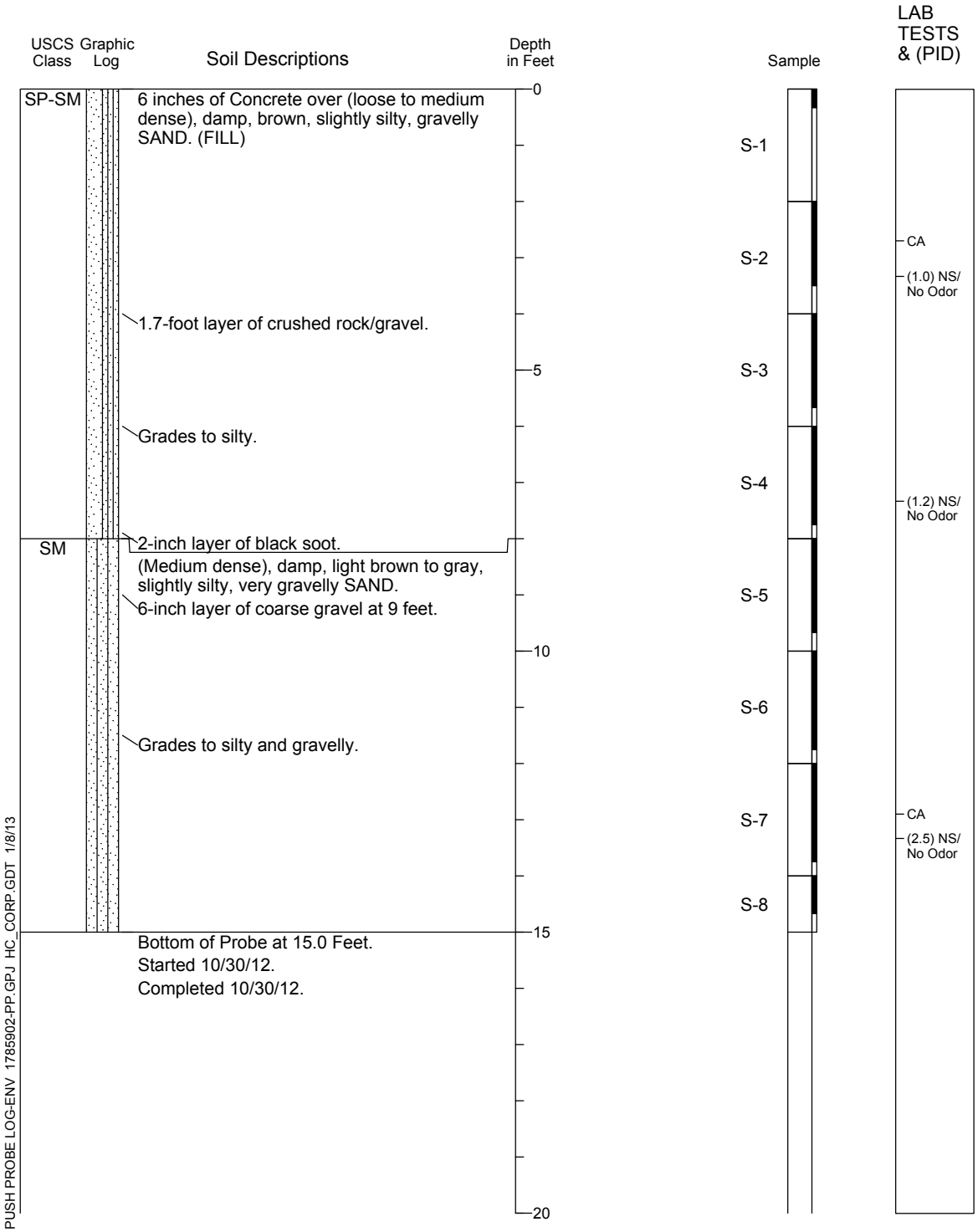
17859-02 ***10/12***

Figure B-11

Push Probe Log HCE-11

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

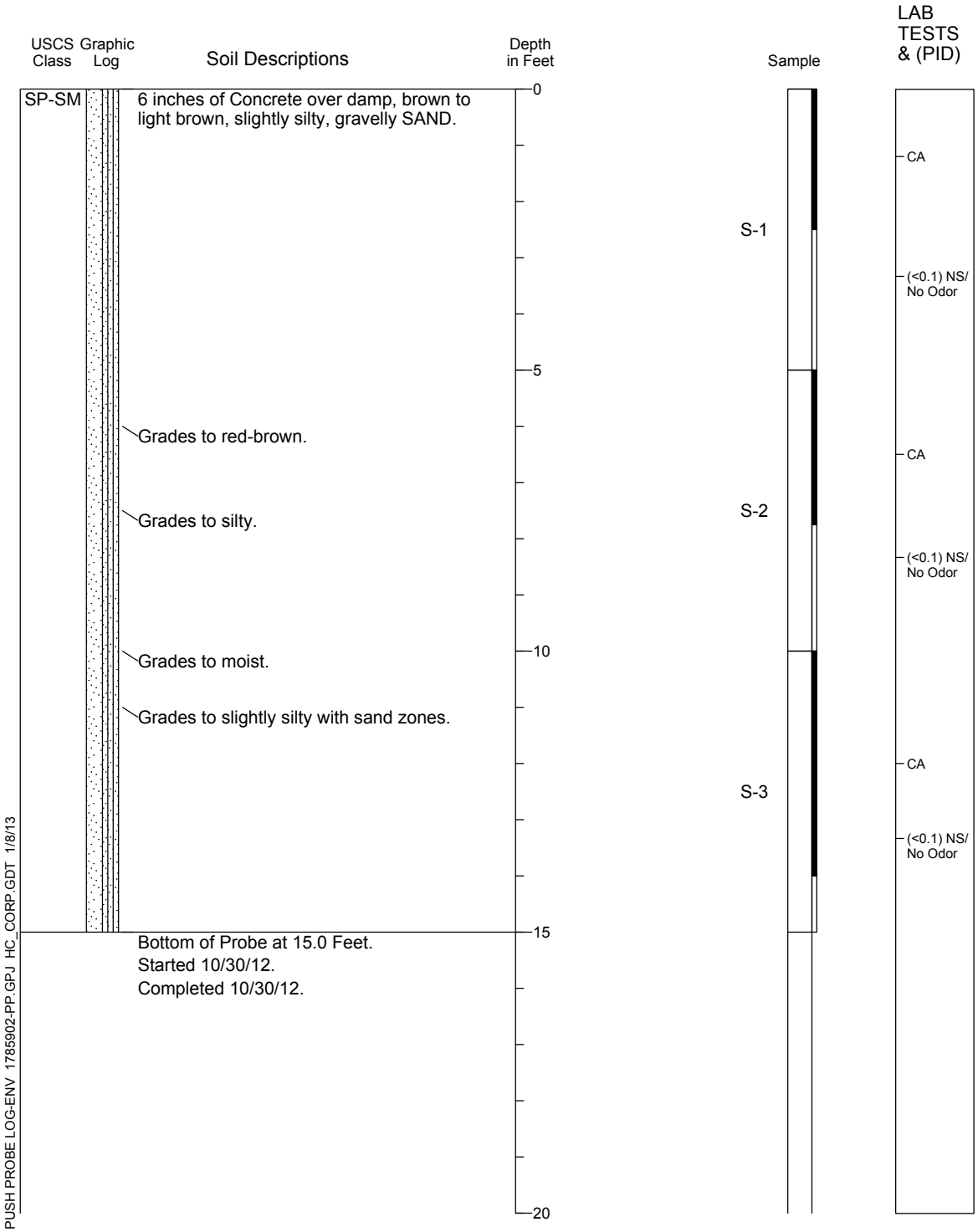
17859-02 ***10/12***

Figure B-12

Push Probe Log HCE-12

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



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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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

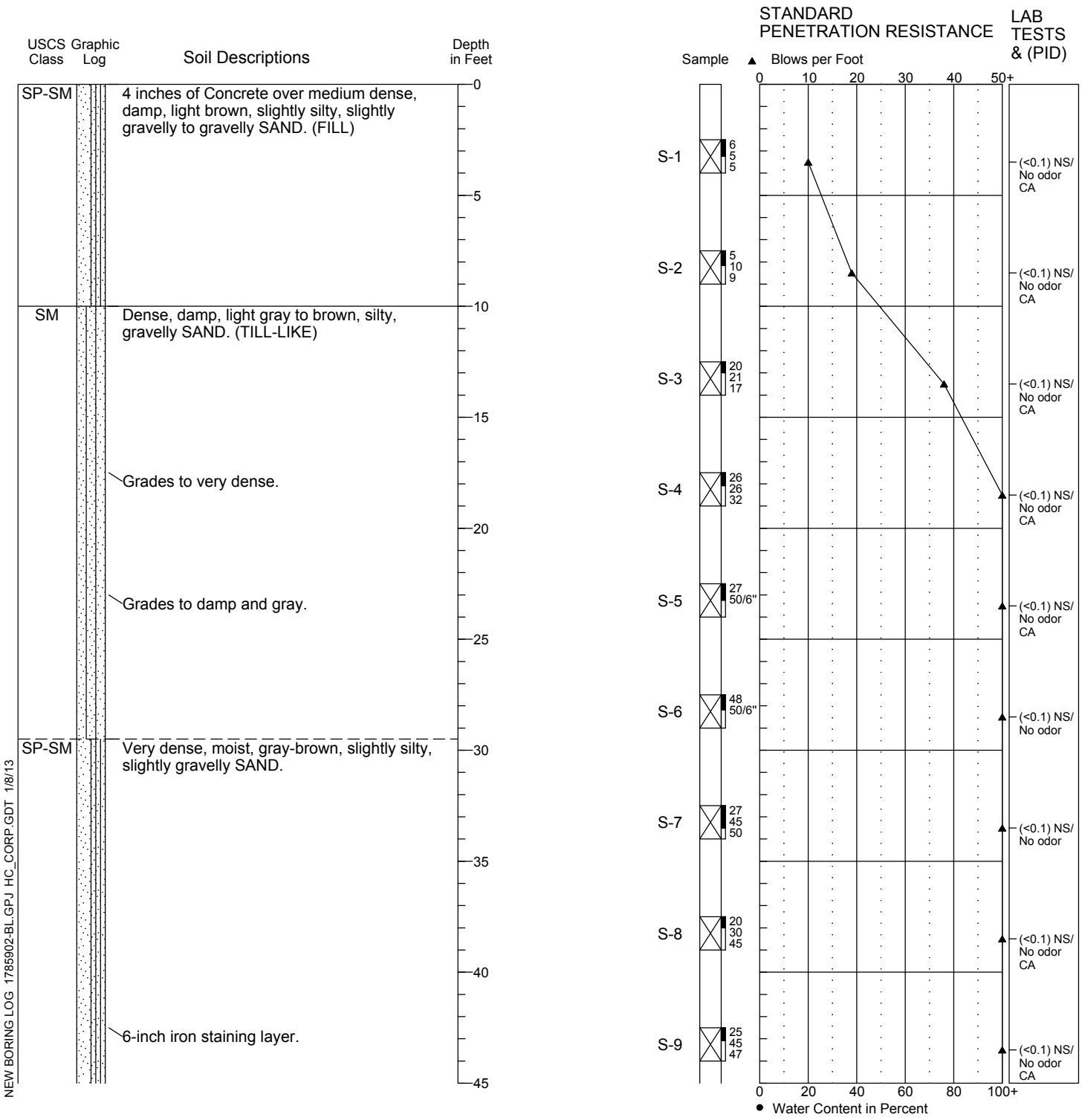
17859-02 ***10/12***

Figure B-13

Boring Log HCE-13

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

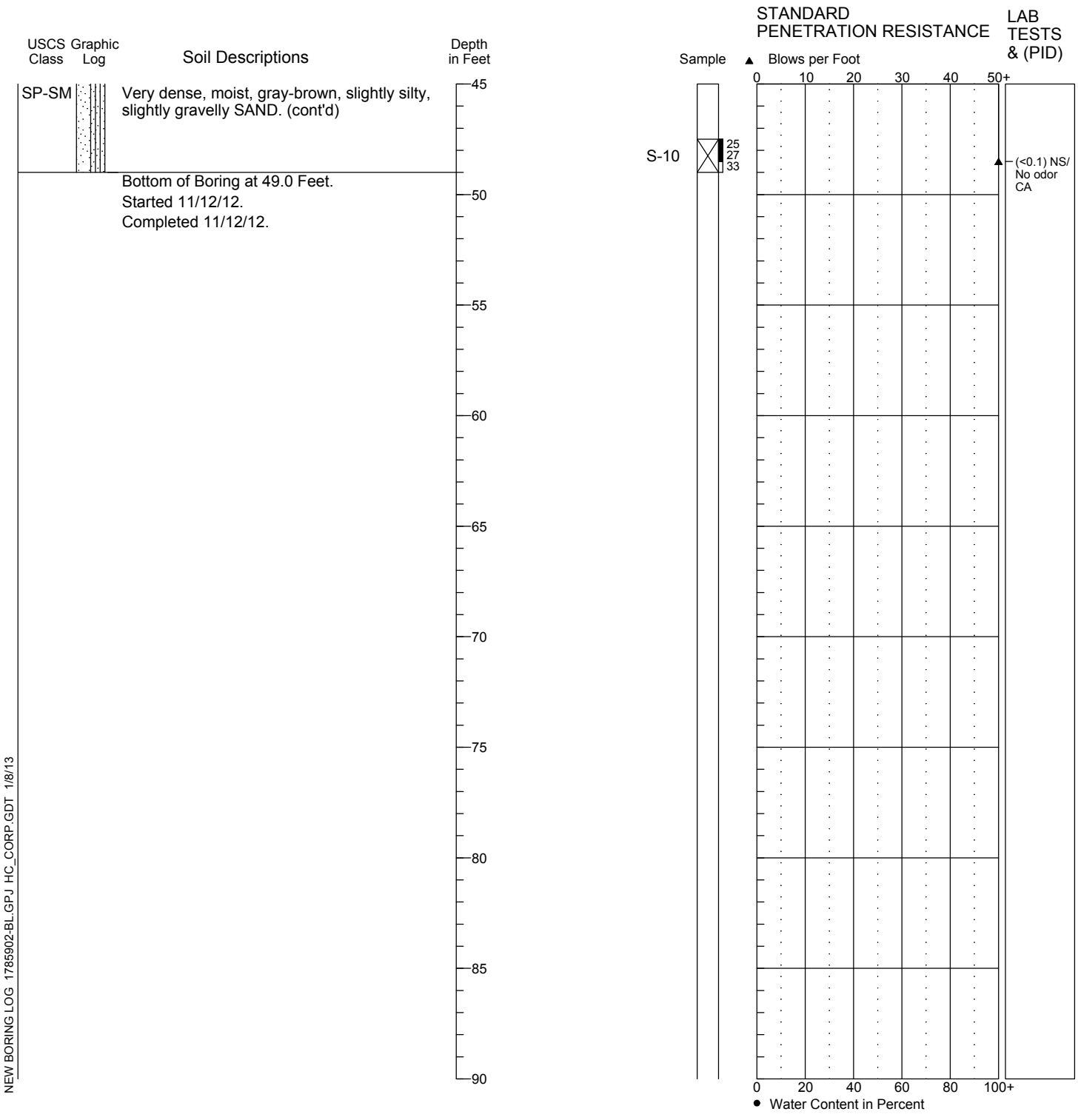
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

Boring Log HCE-13

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

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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.

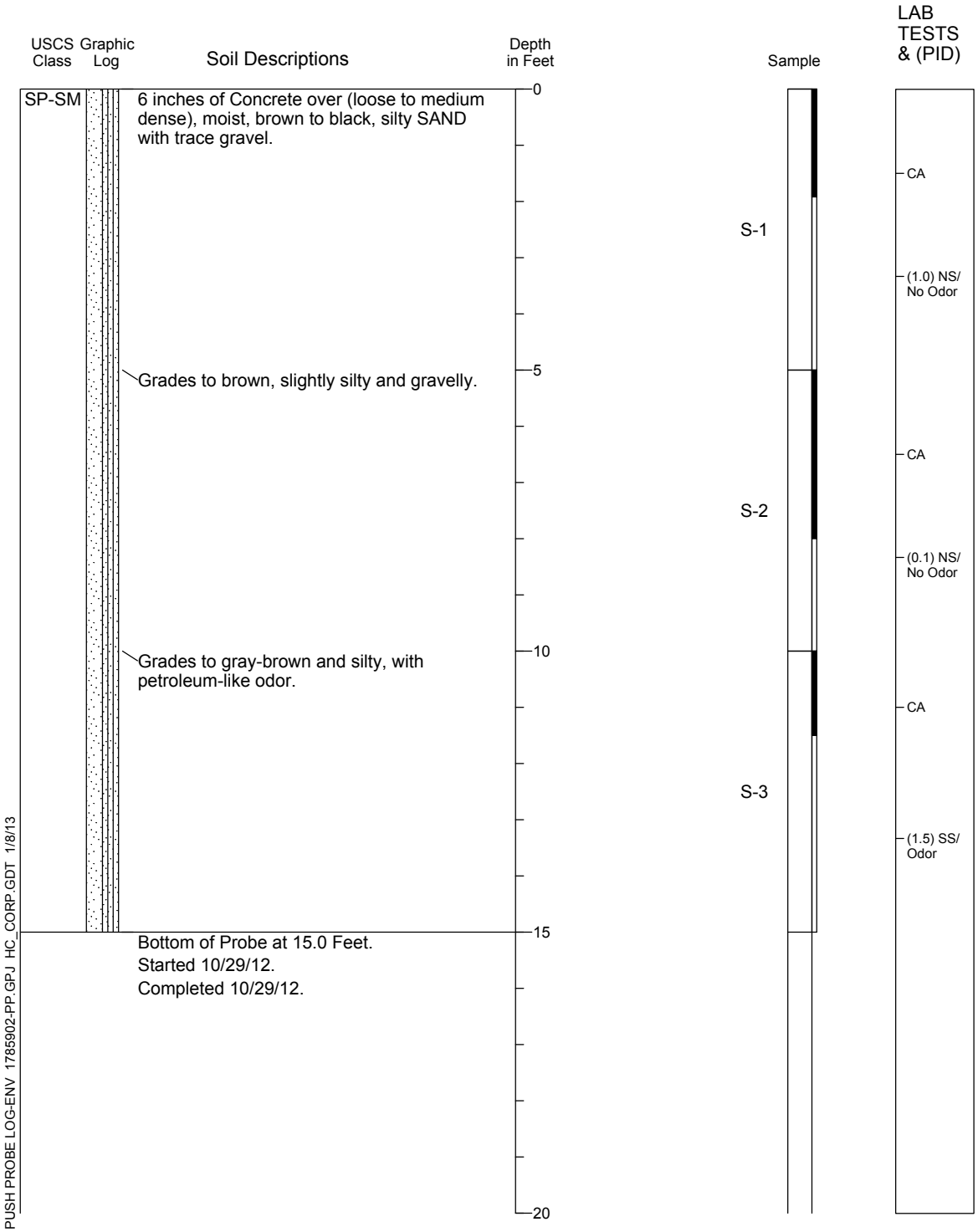
HARTCROWSER

17859-02 ***11/12***
Figure B-14 ***2/2***

Push Probe Log HCE-14

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

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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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

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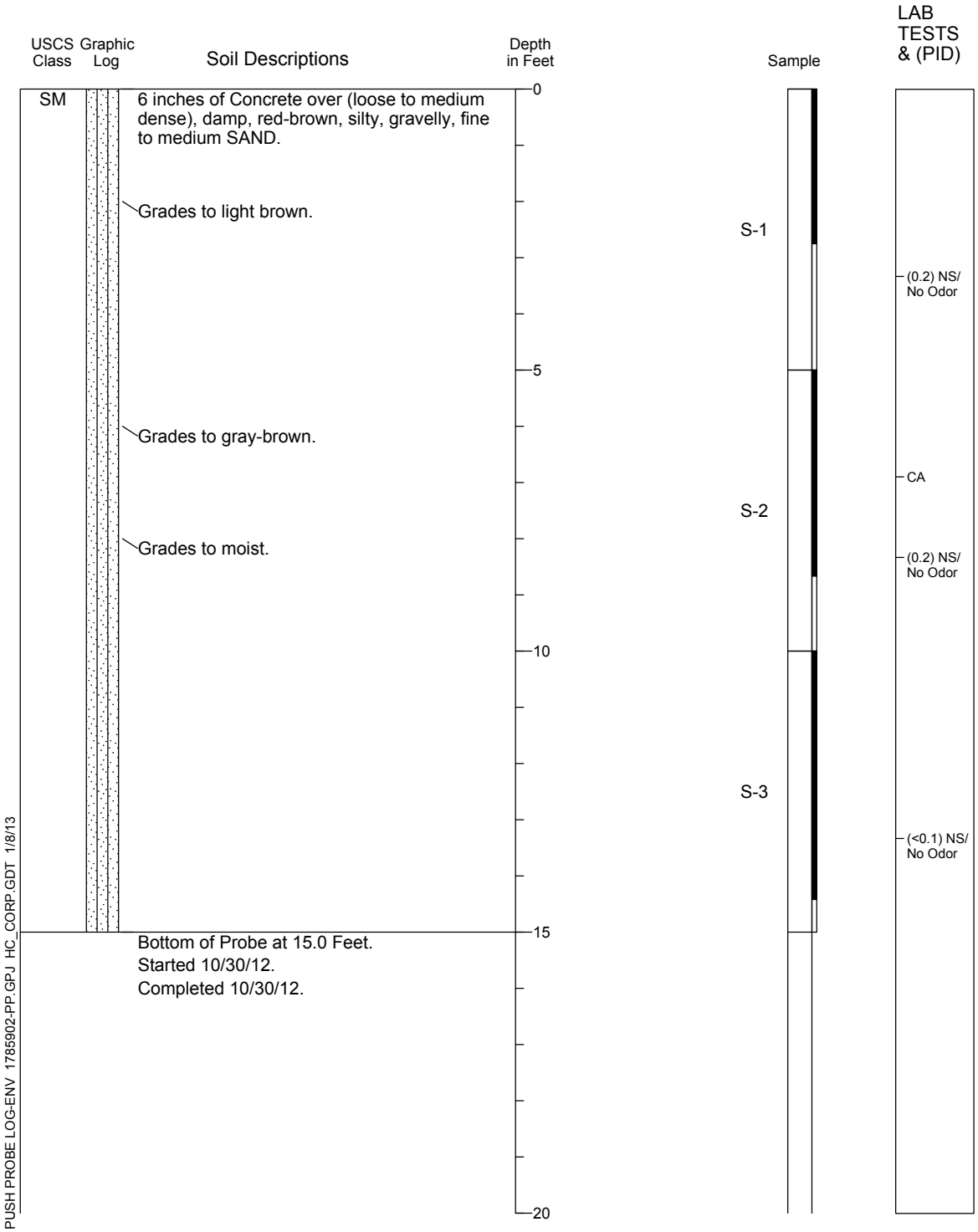
Figure B-15

Push Probe Log HCE-15

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

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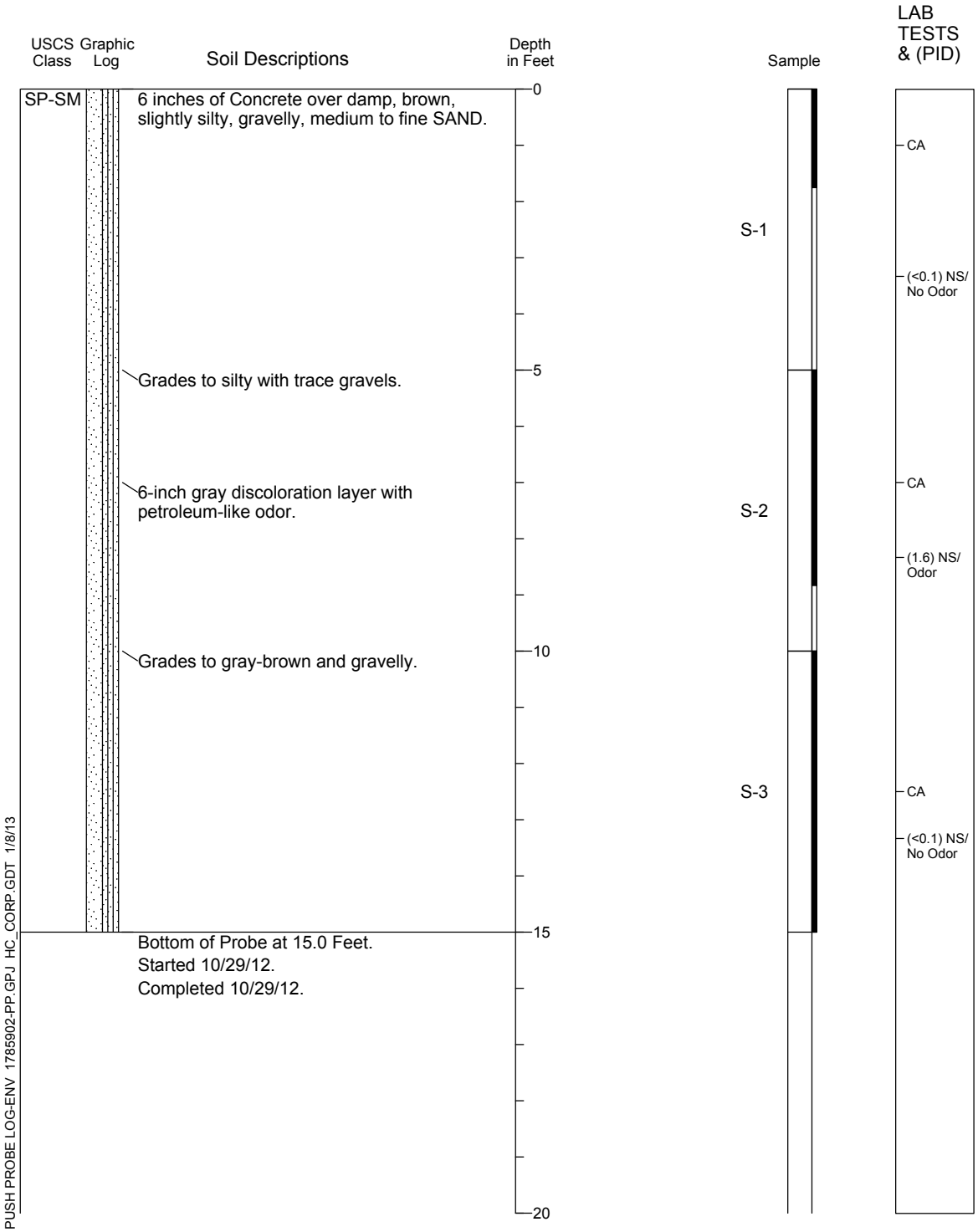
Figure B-16

Push Probe Log HCE-16

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

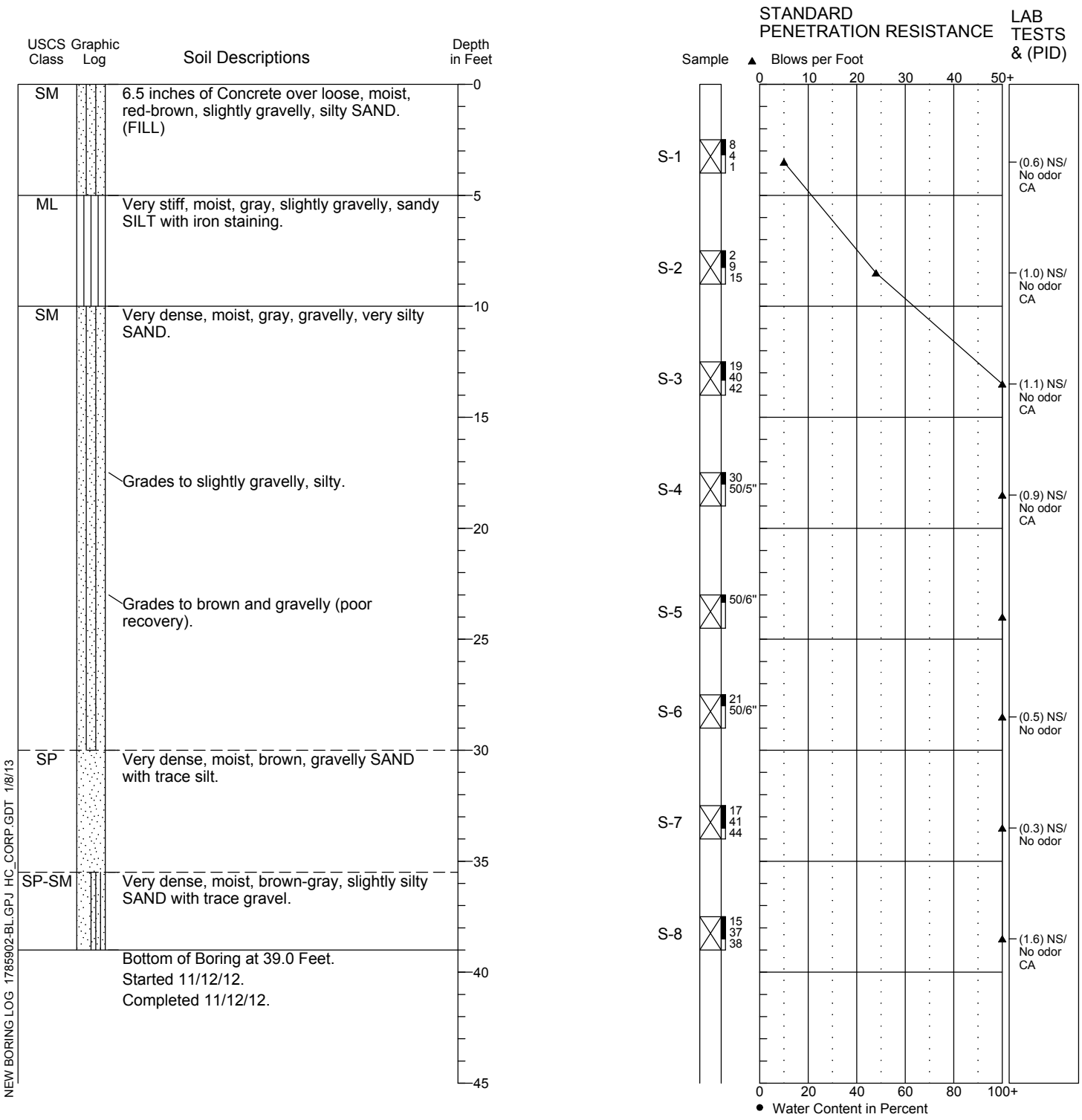
17859-02 *10/12*

Figure B-17

Boring Log HCE-17

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

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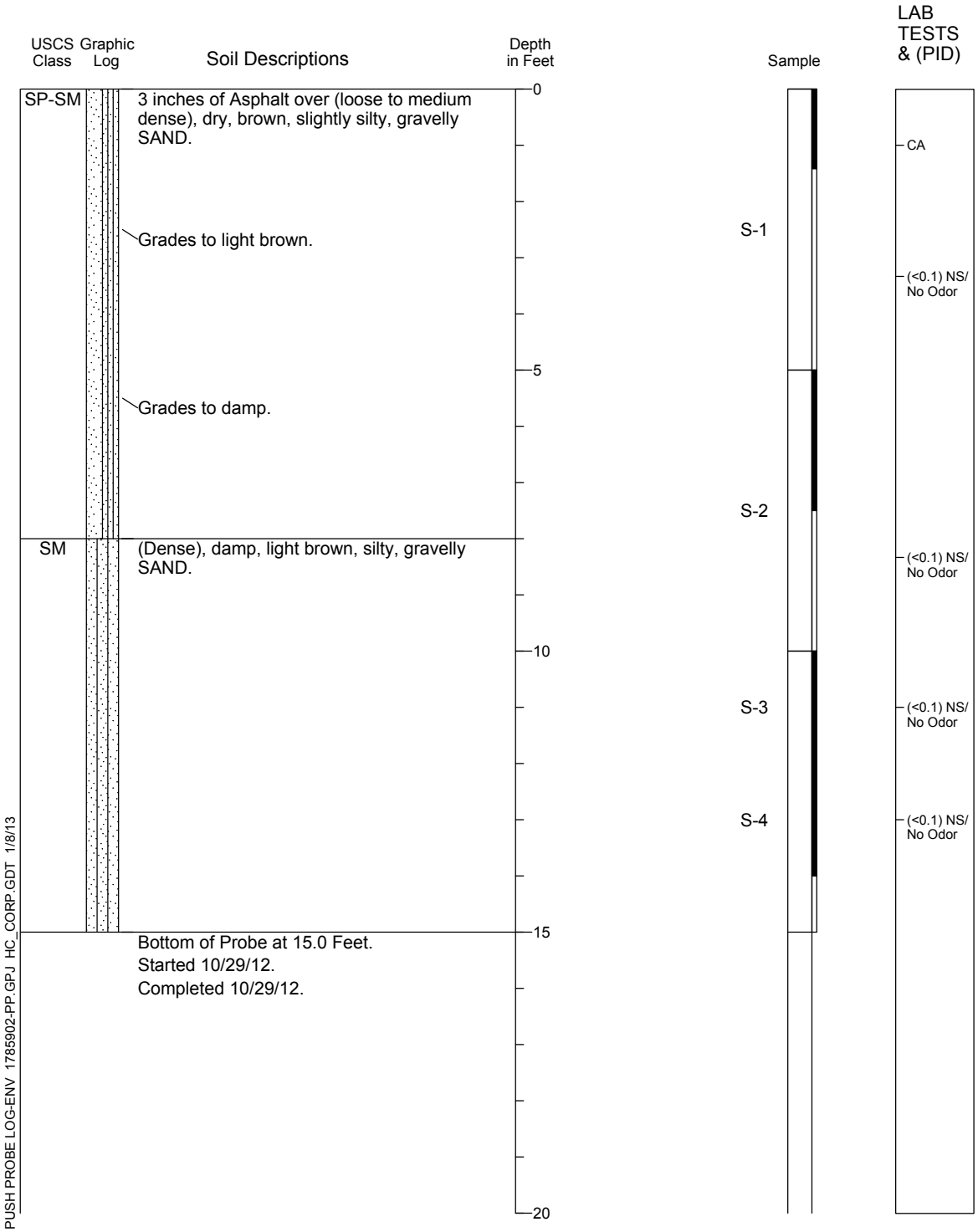
Figure B-18

Push Probe Log HCE-18

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

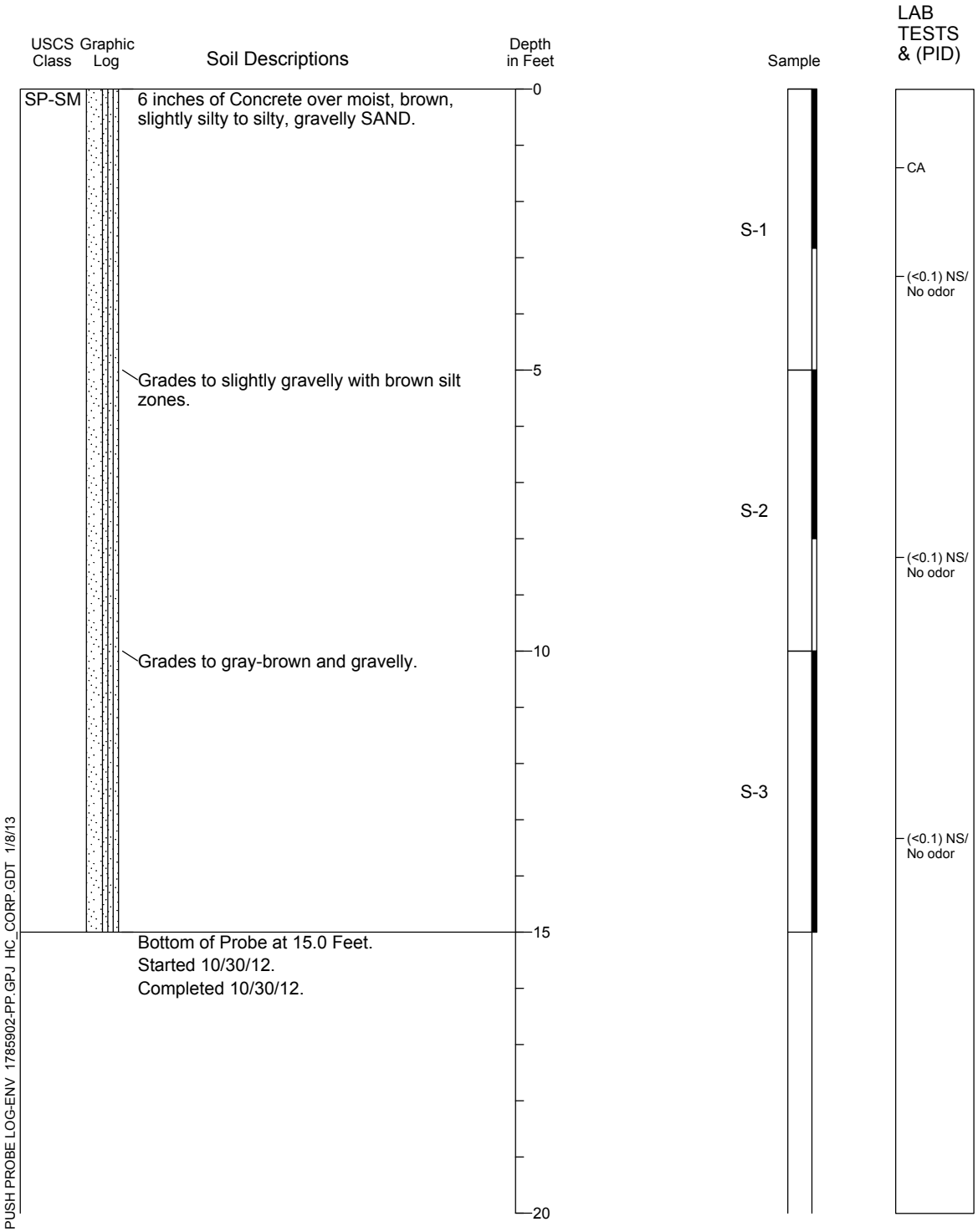
17859-02 ***10/12***

Figure B-19

Push Probe Log HCE-19

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



1. Refer to Figure B-1 for explanation of descriptions and symbols.
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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.
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HARTCROWSER

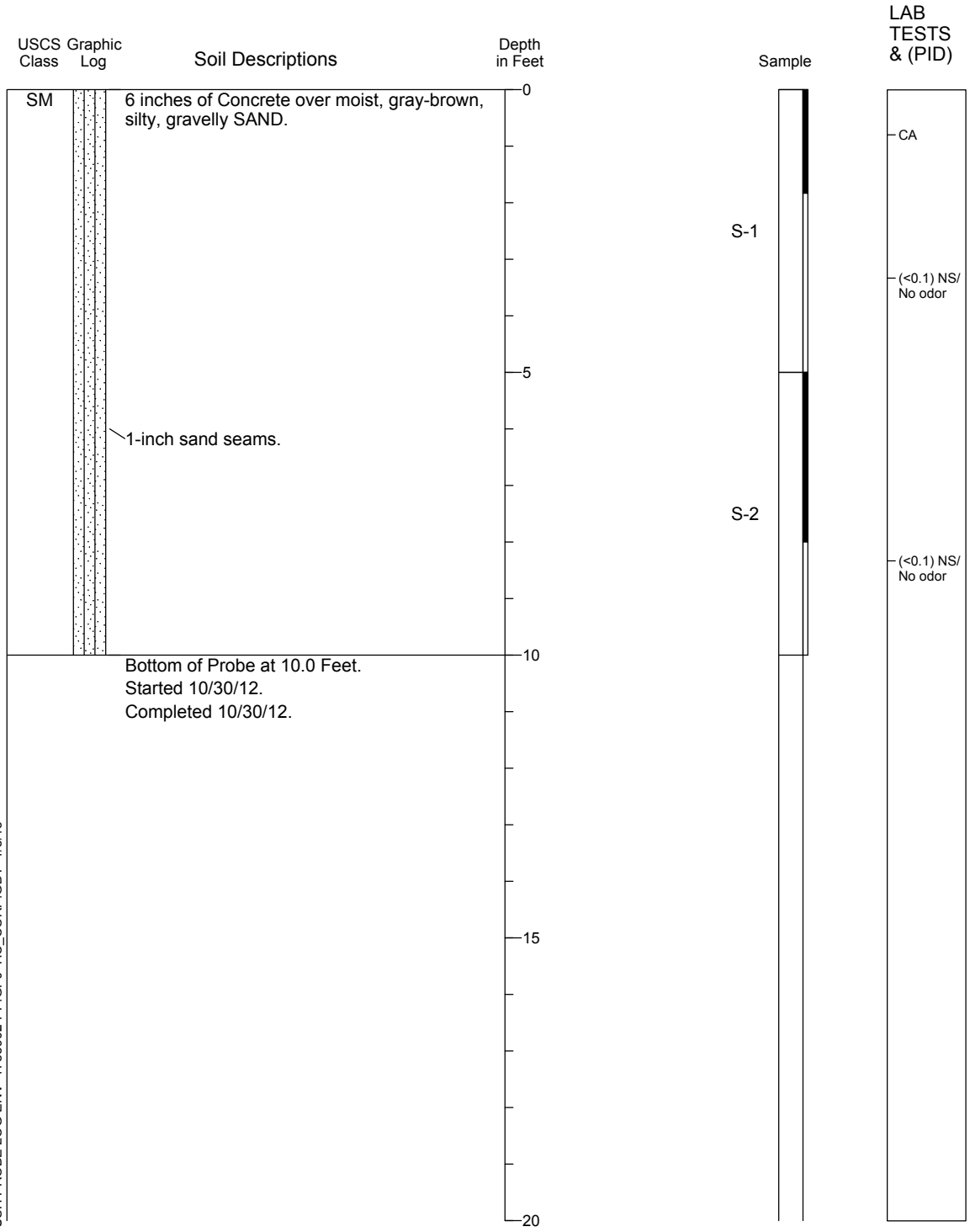
17859-02 ***10/12***

Figure B-20

Push Probe Log HCE-20

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-1 for explanation of descriptions and symbols.
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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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

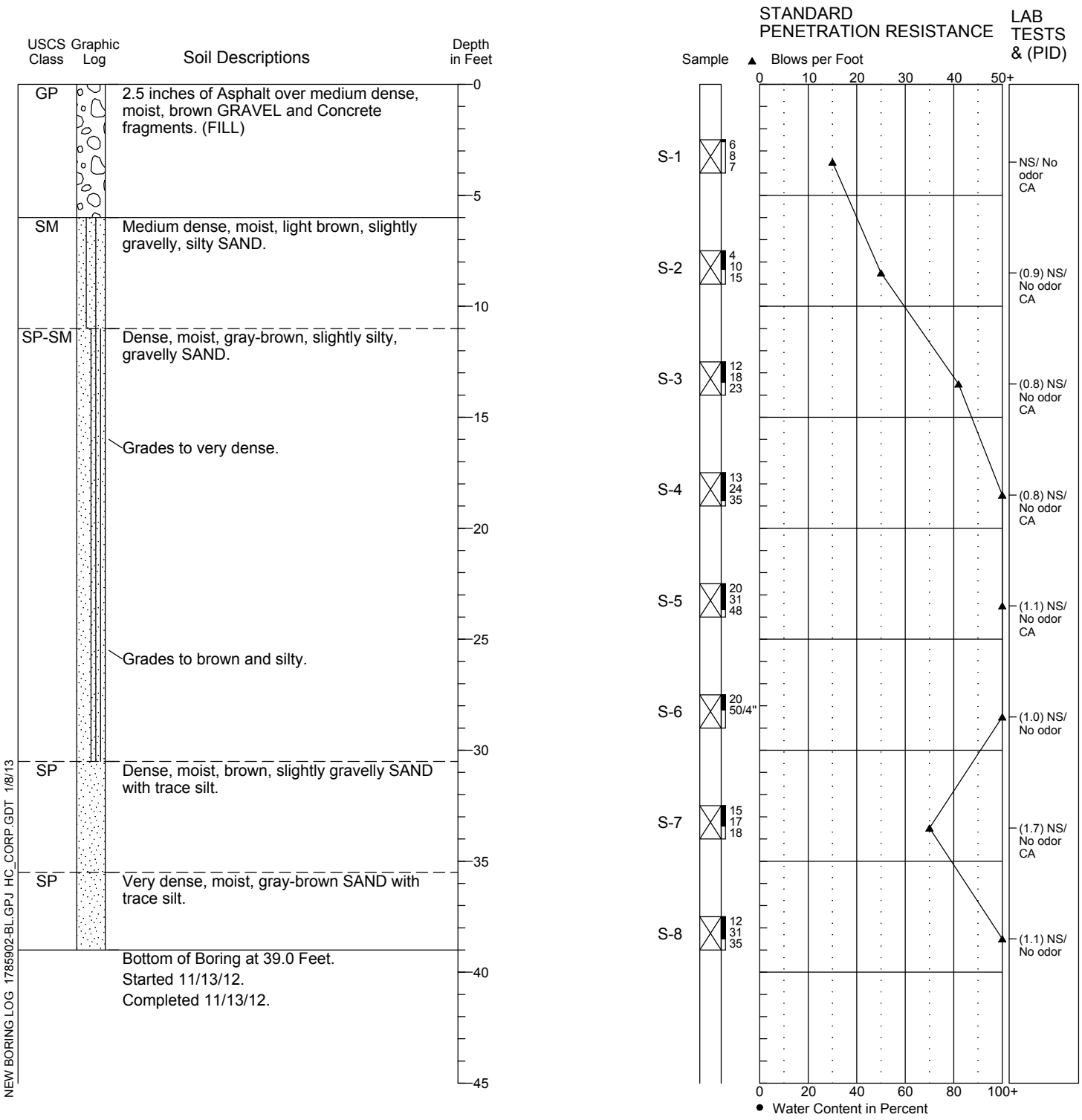
17859-02 ***10/12***

Figure B-21

Boring Log HCE-21

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

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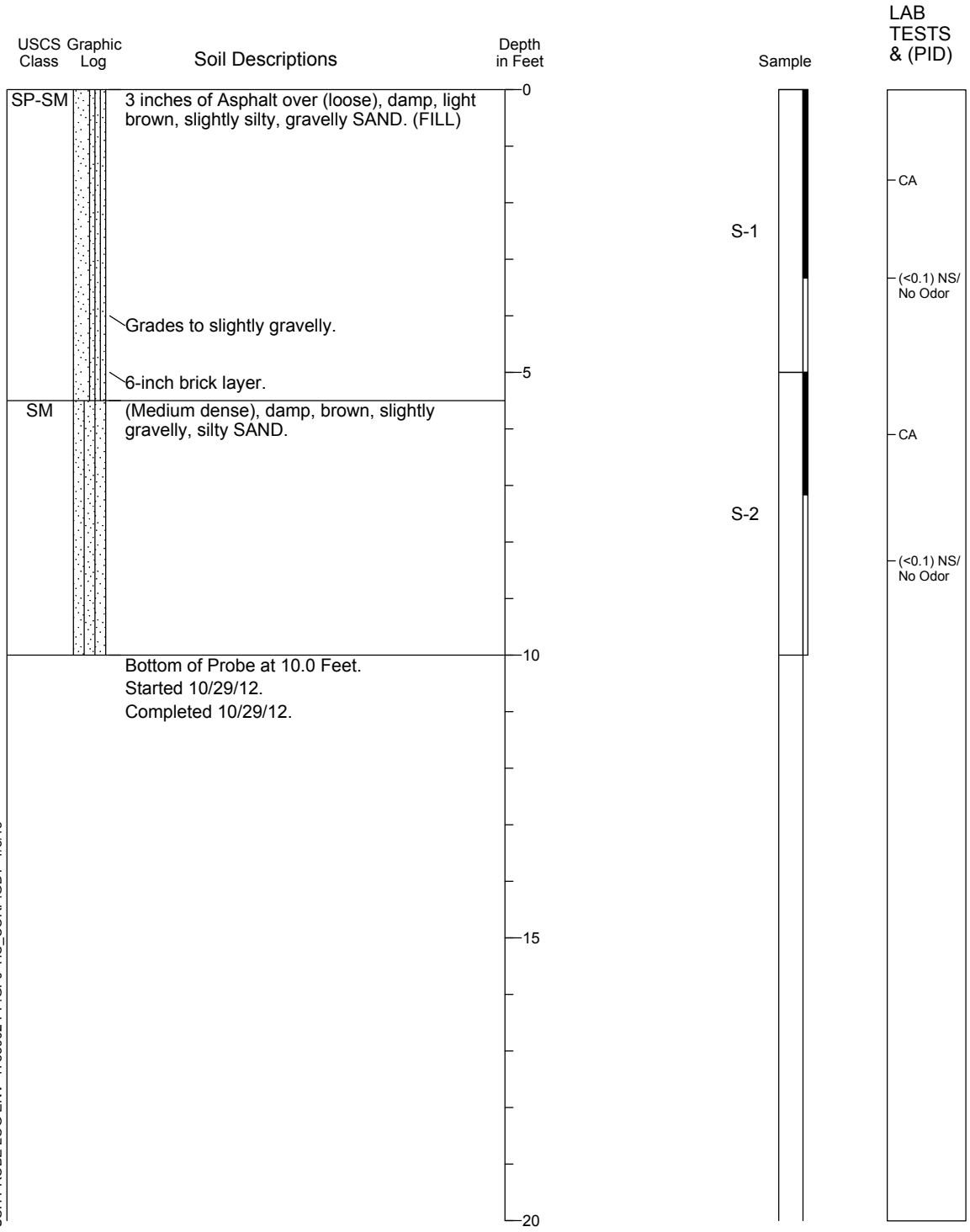
Figure B-22

Push Probe Log HCE-22

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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. NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

HARTCROWSER

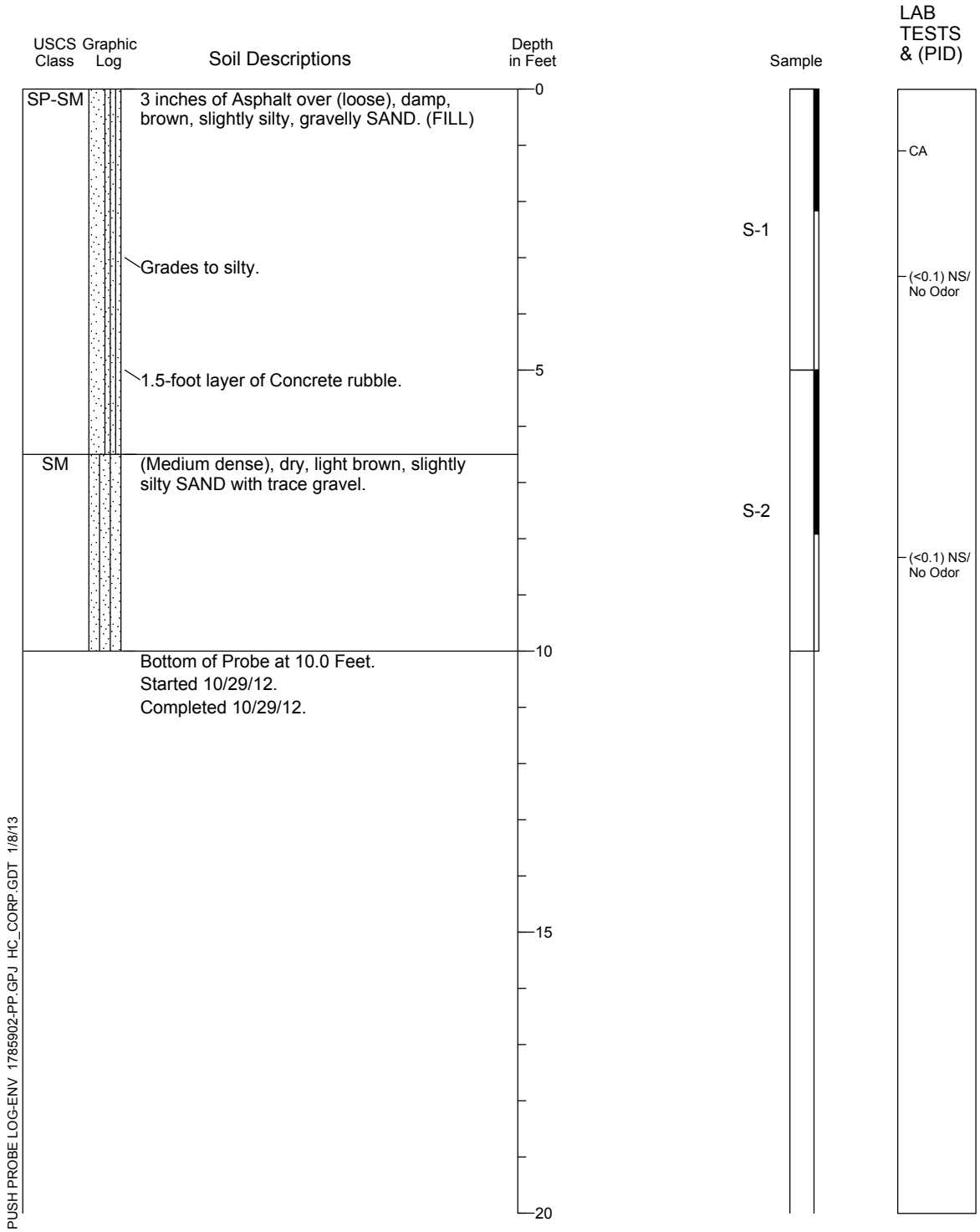
17859-02 ***10/12***

Figure B-23

Push Probe Log HCE-23

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: Push Probe
Sample Type: Acetate Liner
Hole Diameter: 2 inches
Logged By: M. Miller/P. Kastens Reviewed By: A. Goodwin



PUSH PROBE LOG-ENV 1785902-PP.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-1 for explanation of descriptions and symbols.
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HARTCROWSER

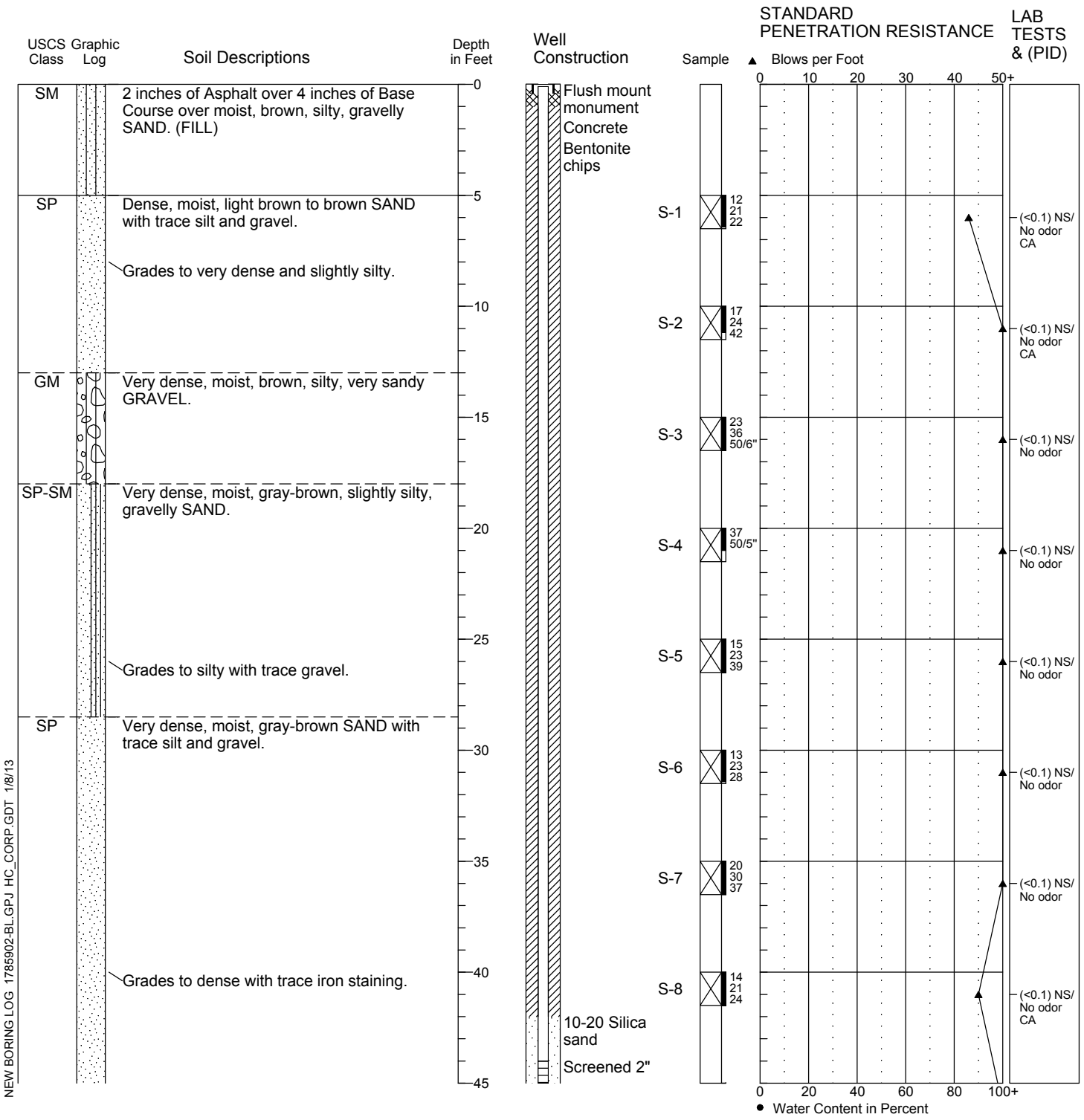
17859-02 ***10/12***

Figure B-24

Boring Log MW-1

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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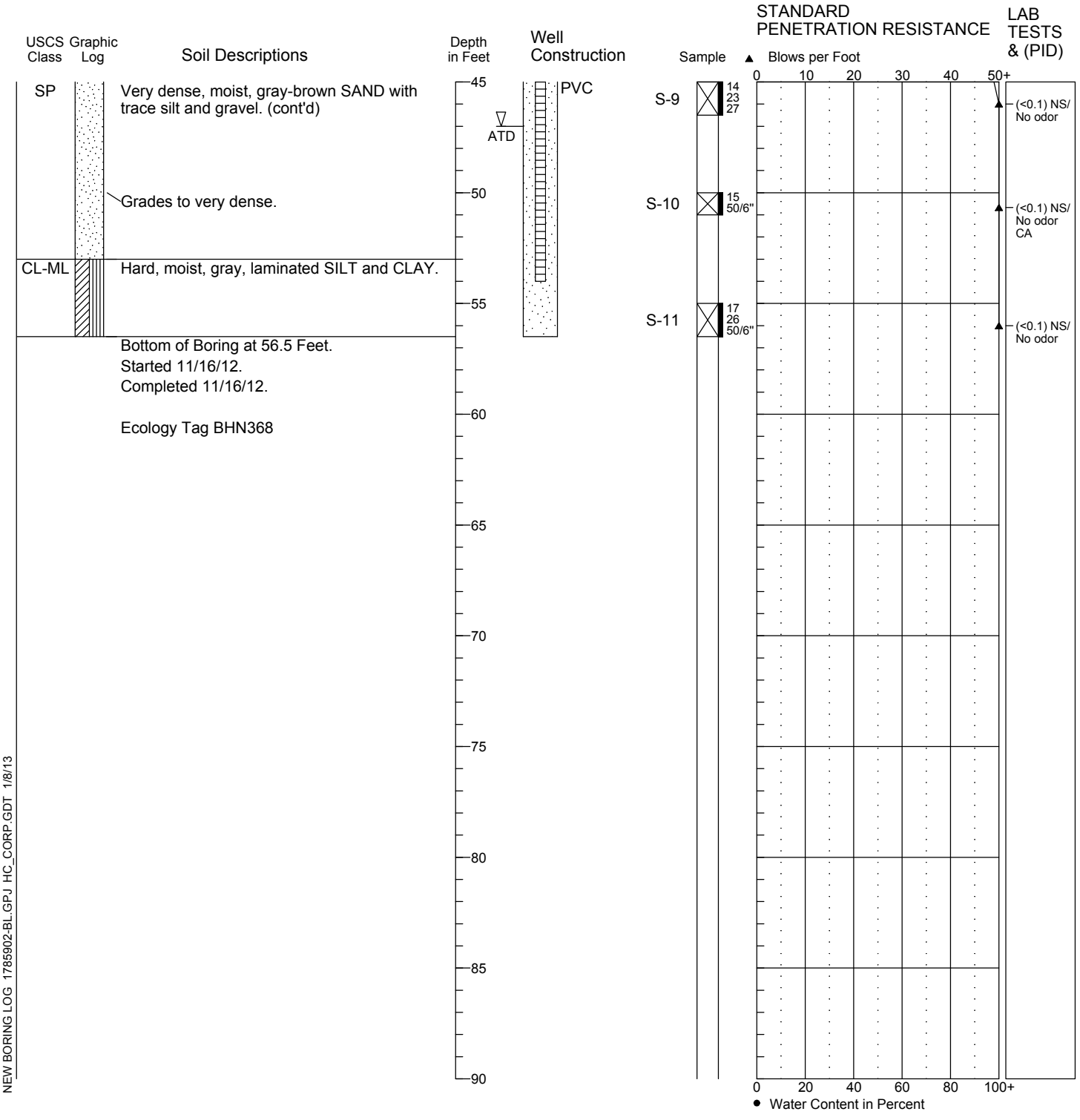
4. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

Boring Log MW-1

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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

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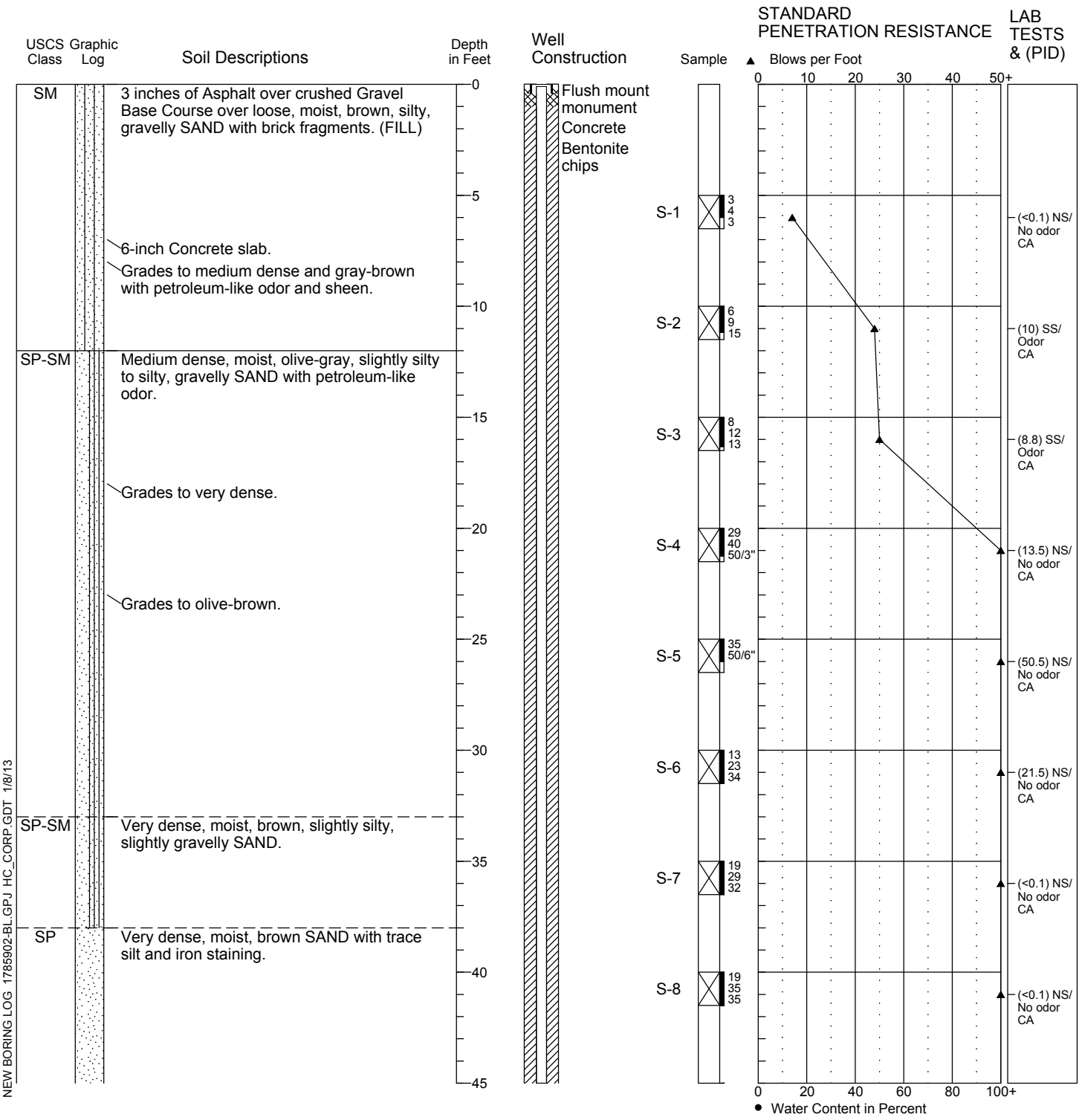
Figure B-25 ***2/2***

Boring Log MW-2

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



NEW BORING LOG 1785902-BL.GPJ HC_CORP.GDT 1/8/13

1. Refer to Figure B-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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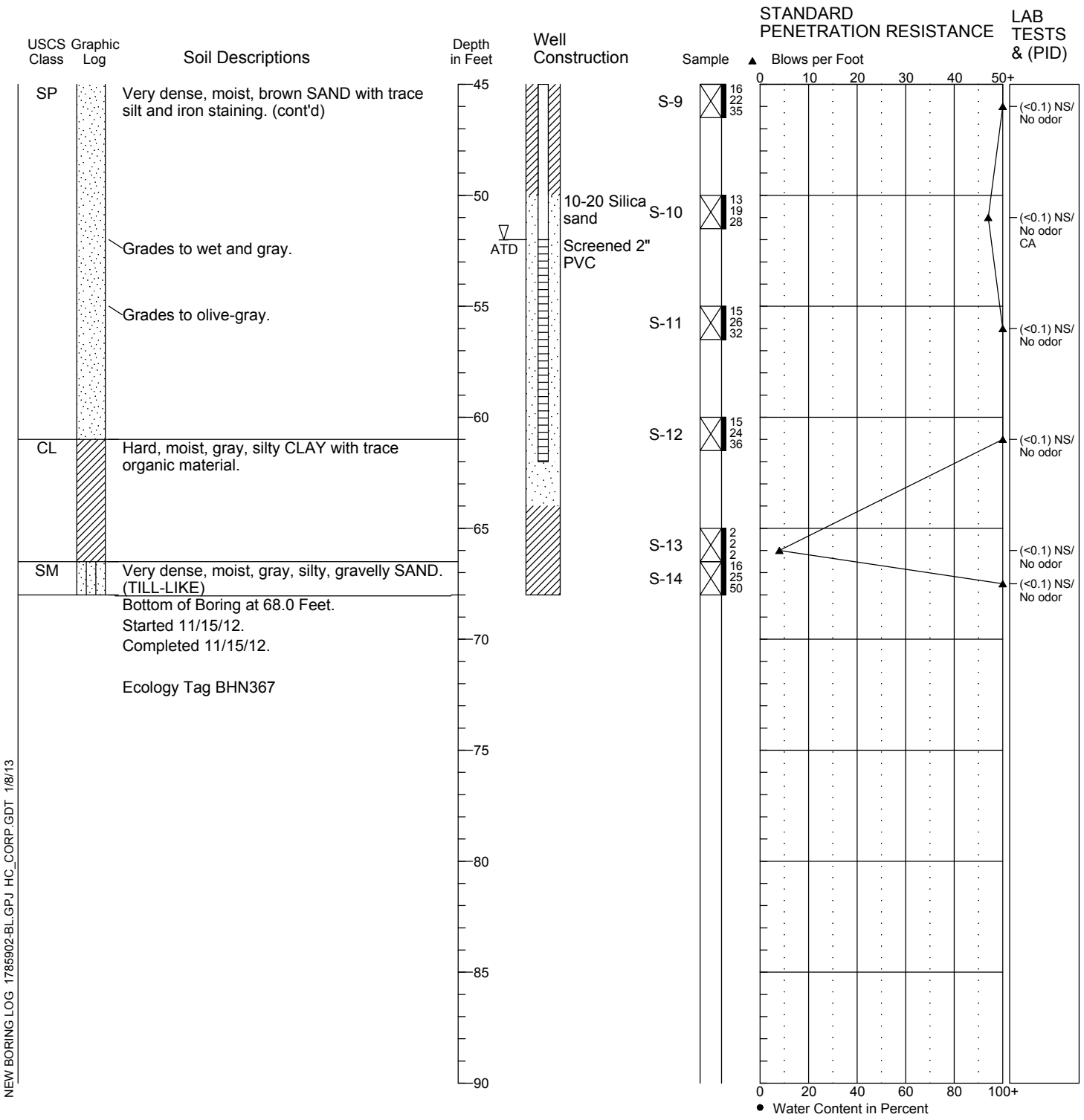
HARTCROWSER

Boring Log MW-2

Location: See Figure 2.
Approximate Ground Surface Elevation: NA Feet
Horizontal Datum: NA
Vertical Datum: NA

Drill Equipment: HSA, Deep Rock XL Trailer Mounted
Hammer Type: SPT w/140 lb. Hammer
Hole Diameter: 8 inches
Logged By: P. Kastens Reviewed By: A. Goodwin



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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.

HARTCROWSER

17859-02 *11/12*
Figure B-26 *2/2*

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APPENDIX C
CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS

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APPENDIX C
CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS

Chemical Data Quality Review

Forty-five soil samples were collected on October 29 and 30, 2012. Eighty soil samples were collected on between November 12 and 16, 2012. Two water samples were collected on November 28, 2012. The samples were submitted to Advanced Analytical Laboratory (AAL), in Redmond, Washington, for chemical analysis. The laboratory reported results as AAL Job Nos. A21105-1, A21119-2, and A21129-4.

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

- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Gasoline range hydrocarbons by Washington State Department of Ecology (Ecology) method NWTPH-Gx;
- Diesel and heavy oil range hydrocarbons by Ecology method NWTPH-Dx.
- Total metals (As, Cd, Cr, Cu, Ni, Pb and Zn) by EPA Method 7010;
- Total mercury by EPA Method 7471A;
- Leachable metals (Pb, Cd, and Zn) by Toxicity Characteristic Leaching Procedure (TCLP), EPA Method 1311/7010; and
- Percent Moisture by SM 2540B.

The water samples were analyzed for the following:

- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Gasoline range hydrocarbons by Ecology method NWTPH-Gx;
- Diesel and heavy oil range hydrocarbons by Ecology method NWTPH-Dx;
- Total metals (As, Cd, Cr, Cu, Ni, Pb and Zn) by EPA Method 7010; and
- Total mercury by EPA Method 7470A.

The laboratory performed quality assurance/quality control (QA/QC) reviews on an ongoing basis. Hart Crowser reviewed the data to ensure they met data quality objectives for the project and recorded the results on laboratory quality control summary sheets.

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

- Holding times;
- Reporting limits;

- Method blanks;
- Surrogate recoveries;
- Laboratory control sample (LCS) recoveries;
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries; and
- Laboratory duplicate relative percent differences (RPDs).

The data were determined to be acceptable for use with qualification. The laboratory reports are presented at the end of this Appendix. The data review is summarized in the following pages.

Sample Receiving Discrepancies

A21105-1: Sample HCE-11-S4 was listed on the Chain of Custody but was not received at the laboratory. The analysis of that sample was canceled.

Method Discrepancies

NWTPH-Dx: The method requires the preparation and analysis of a laboratory duplicate for every ten samples. Only one laboratory duplicate was performed for the soil samples extracted on November 5, 2012, though eighteen samples were analyzed. No laboratory duplicates were performed for the soil samples extracted on November 19, 2012, though fifteen samples were analyzed. Three laboratory duplicates were prepared on November 20, 2012, associated with twenty-three samples. Sample results were not qualified.

NWTPH-Gx: The method requires the preparation and analysis of a laboratory duplicate for every ten samples. No laboratory duplicate was performed for the soil samples prepared and analyzed on November 20, 2012, though eleven samples were analyzed. Three duplicate samples were prepared and analyzed on November 19, 2012, associated with fourteen samples. Sample results were not qualified.

EPA 7010: The method requires the preparation and analysis of a duplicate/matrix spike or matrix spike/matrix spike duplicate. The matrix spike prepared by the laboratory did not include the target metals copper, nickel, or zinc. Sample results were not qualified.

Soil Samples

VOCs by EPA 8260B

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

Gasoline by NWTPH-Gx

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

Diesel and Heavy Oil Range Hydrocarbons by NWTPH-Dx

Holding times and reporting limits were acceptable. No method blank contamination was detected. The laboratory duplicate RPD was not applicable because the sample and duplicate results were below the reporting limit.

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

- HCE-6-S2: The recovery of the surrogate Fluorobiphenyl was not reported due to matrix interferences. The recovery of the surrogate o-Terphenyl was not reported due to coelution with sample peaks. High levels of heavy oil were present in the sample. Review of the sample chromatogram confirmed the interferences, and sample results were not qualified.

- HCE-7-S2, HCE-7-S3, and HCE-7-S5: The recoveries of the surrogates Fluorobiphenyl and o-Terphenyl were not reported due to coelution with sample peaks. High levels of diesel range hydrocarbons were present in the samples, and results were not qualified.

- HCE-7-S4, HCE-17-S2, and HCE-17-S3: The recoveries of the surrogate o-Terphenyl were not reported due to coelution with sample peaks. The recoveries of Fluorobiphenyl were in control limits, and sample results were not qualified.

Total Metals by EPA 7010

Holding times and reporting limits were acceptable. No method blank contamination was detected.

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

- LCS-11/06/12: The recovery for zinc exceeded the method control limits of 80 to 120 percent. Detections for zinc in the associated samples (HCE-1-S1, HCE-1-S2, HCE-3-S1, HCE-3-S2, HCE-4-S1, HCE-6-S1, HCE-8-S3, HCE-10-S7, HCE-11-S7, HCE-12-S3, HCE-14-S3, HCE-16-S1, HCE-18-S1, HCE-19-S1, and HCE-20-S1) were qualified as estimated (J).

- LCS-11/29/12: The recovery for cadmium exceeded the method control limits of 80 to 120 percent. Cadmium results in the associated samples were below the reporting limits, and no sample results were qualified.

The MS recoveries were within method and laboratory control limits with the following exception:

- HCE-9-S5 MS: The recovery for chromium exceeded the method control limits of 75 to 125 percent. As the source sample was below the reporting limits for chromium, no results were qualified.

The laboratory duplicate RPD was within laboratory and method control limits with the following exception:

- MW-2-S5 Dup: The RPD exceeds the method control limits for copper, nickel, and zinc. The results for copper were less than five times the reporting limit, and not qualified. The results for nickel and zinc were qualified as estimated (J) in MW-2-S5.

Total Mercury by EPA 7471

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

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

- LCS-11/06/12: The recovery for mercury fell below the method control limits of 80 to 120 percent. Results for mercury in the associated samples (HCE-1-S1, HCE-1-S2, HCE-3-S1, HCE-3-S2, HCE-4-S1, HCE-6-S1, HCE-8-S3, HCE-10-S7, HCE-11-S7, HCE-12-S3, HCE-14-S3, HCE-16-S1, HCE-18-S1, HCE-19-S1, and HCE-20-S1) were qualified as estimated (J).

- LCS-11/29/12: The recovery for mercury fell below the method control limits of 80 to 120 percent. Results for mercury in the associated samples (HCE-2-S1, HCE-2-S2, HCE-5-S1, HCE-5-S2, HCE-5-S3, HCE-5-S4, HCE-7-S3, HCE-7-S4, HCE-7-S5, HCE-9-S3, HCE-9-S4, and HCE-9-S5) were qualified as estimated (J).

TCLP Metals by EPA 1311/7010

Holding times and reporting limits were acceptable. No method blank contamination was detected. The laboratory duplicate RPD was within laboratory and method control limits.

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

- LCS-11/07/12: The recovery for zinc fell below the method control limits of 80 to 120 percent. The results for zinc in the associated samples (HCE-8-S1, HCE-8-S2, HCE-10-S2, HCE-10-S4, HCE-11-S2, HCE-12-S1, HCE-12-S2, HCE-14-S1, and HCE-14-S2) were qualified as estimated (J).

- LCS-11/30/12: The recovery for zinc fell below the method control limits of 80 to 120 percent. The results for zinc in the associated samples (HCE-7-S1, HCE-7-S2, HCE-9-S1, HCE-9-S2, HCE-13-S1, HCE-13-S2, and MW-2-S1) were qualified as estimated (J).

The MS recoveries were within method and laboratory control limits with the following exception:

- HCE-14-S2 MS: The recovery for lead fell below the method control limits of 75 to 125 percent. Results for lead in the source sample, HCE-14-S2 were qualified as estimated (J).

Percent Moisture by SM 2540B

Holding times and reporting limits were acceptable.

Water Samples

VOCs by EPA 8260B

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

Gasoline by NWTPH-Gx

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

Diesel and Heavy Oil Range Hydrocarbons by NWTPH-Dx

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

Total Metals by EPA 7010

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

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

- LCS-11/30/12: The recovery for zinc fell below the method control limits of 80 to 120 percent. Results for zinc in the associated samples (MW-1 and MW-2) were qualified as estimated (J).

Total Mercury by EPA 7470A

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

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

- LCS-11/30/12: The recovery for mercury fell below the method control limits of 80 to 120 percent. Results for mercury in the associated samples (MW-1 and MW-2) were qualified as estimated (J).

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LABORATORY REPORTS
ADVANCED ANALYTICAL LABORATORY

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for double-sided printing.

ADVANCED ANALYTICAL

Environmental Testing Laboratory

November 15, 2012

Julie Wukelic
Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, WA 98109

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *Former BMW, 17859-02* ***(A21105-1)*** Project.

Samples were received on *November 05, 2012*. 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) 497-0110.

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

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052
ph 425.497.0110 fax 425.497.8089
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

1 of 4

A2 1105-1

(1)

HARTCROWSER

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

JOB ~~17826~~ 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic; Angi Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals (Pb, Cr, Cd, As, Hg, Cu, Ni, Zn)*	% Moisture	TCLP (Pb, Cd, Cr)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-1-S1	4oz jar; VOA	10/29/12	1300	Soil	X			X	X		2	
	HCE-1-S2		↓	1305		X	X	X	X	X		2	
	HCE-1-S3		↓	1312				X		X		2	
	HCE-3-S1		10/30/12	0857		X			X	X		2	
	HCE-3-S2		↓	0855		X	X	X	X	X		2	
	HCE-3-S3		↓	0900				X		X		2	
	HCE-4-S1		10/29/12	1345		X	X	X	X	X		2	
	HCE-4-S2		↓	1352								2	Hold
	HCE-4-S3		↓	1359		X	X	X		X		2	
	HCE-6-S1		↓	1320		X	X	X	X	X		2	
	HCE-6-S2		↓	1328		X	X	X		X		2	
	HCE-6-S3		↓	1337		X				X		2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angi Goodwin	11/5/12	SIGNATURE V. Wanov	11/05/12
PRINT NAME Angi Goodwin	TIME	PRINT NAME VAL IVANOV	TIME
COMPANY HC	1230	COMPANY AAL	1332
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Tot Metals: Pb, Cr, Cd, As, Hg, Cu, Ni, ~~Ag~~ Zn (HC MTCA Metals)

24 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

Samples Shipped to: AAL

284

A2110S-1 (2)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic & Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals (7471A)	% Moisture	TCLP (Pb, Cd)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-8-S1	4oz jar; VOA	10/30/12	1310	Soil						X	2	
	HCE-8-S2			1312							X	2	
	HCE-8-S3			1315		X	X	X	X	X		2	
	HCE-10-S2			1020							X	2	
	HCE-10-S4			1024							X	2	
	HCE-10S7			1050					X	X		2	
	HCE-11-S2			1141							X	2	
	HCE-11-S4			1204							⊗	2	⊗ Canceled per A. Goodwin. The sample is missing VBS
	HCE-11-S7			1245					X	X		2	
	HCE-12-S1			1059							X	2	
	HCE-12-S2			1105							X	2	
	HEE-12-S3			1110					X	X		2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/5/12	SIGNATURE V. Ivanov	11/05/12
PRINT NAME Angie Goodwin	TIME 1230	PRINT NAME Vol Ivanov	TIME 1330
COMPANY HC		COMPANY AAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Total Metals - HC MTCA Metals

24 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

Samples Shipped to: AAL

384

A21105-1 (3)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic & Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals (6010B/7471A)	% Moisture	TCLP (RCRA, 1311)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-14-S1	4oz ; VOA	10/30/12	1023	Soil						X	2	
	HCE-14-S2			1027							X	2	
	HCE-14-S3			1032		X	X	X	X	X		2	
	HCE-15-S1		10/29/12	1129								2	Hold
	HCE-15-S2			1133		X				X		2	
	HCE-15-S3			1138								2	Hold
	HCE-16-S1			1047					X	X		2	
	HCE-16-S2			1050		X	X	X		X		2	
	HCE-16-S3			1054		X				X		2	
	HCE-18-S1			0826		X			X	X		2	
	HCE-18-S2			0831								2	Hold
	HCE-18-S3			0837								2	Hold

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/5/12	SIGNATURE V. Ivanov	11/05/12
PRINT NAME Angie Goodwin	TIME 1230	PRINT NAME VAL IVANOV	TIME 1330
COMPANY HC		COMPANY AAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Total Metals - HC MTCA Metals

24 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

Samples Shipped to: AAL

4 of 4

A21105-1 (4)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMD

HART CROWSER CONTACT Julie Wukelic; Angie Goodwin

SAMPLED BY: MM | PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NW TPH-Dx	NW TPH-Gx	VOCs (8260B)	Metals (Pb only)*	% Moisture	TCLP (Cr, Cd, Pb)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-19-S1	4oz; VOA	10/30/12	1202	Soil				X	X		2	
	HCE-19-S2			1205								2	Hold
	HCE-19-S3			1209								2	Hold
	HCE-20-S1			1238					X	X		2	
	HCE-20-S2			1240								2	Hold
	HCE-22-S1		10/29/12	0942		X				X		2	
	HCE-22-S2			0957		X				X		2	
	HCE-23-S1			0916		X				X		2	
	HCE-23-S2			0922								2	Hold

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Angie Goodwin	11/5/12	V. Ivanov	11/05/12
SIGNATURE	TIME	SIGNATURE	TIME
Angie Goodwin	1230	V. IVANOV	1330
PRINT NAME		PRINT NAME	
HC		AAL	
COMPANY		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Total Metals - Ht MTCA Metals

18 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:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

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

AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	HCE-1-S1	HCE-1-S2	HCE-3-S1	HCE-3-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
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		108%	105%	107%	106%	107%
o-Terphenyl		110%	102%	104%	104%	105%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M - matrix interference
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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-4-S1	HCE-4-S3	HCE-6-S1	HCE-6-S2	HCE-6-S3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	5,400	97
Surrogate recoveries:						
Fluorobiphenyl		107%	106%	108%	M	110%
o-Terphenyl		105%	103%	105%	C	107%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M - matrix interference
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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-8-S3	HCE-14-S3	HCE-15-S2	HCE-16-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
Kerosene/Jet fuel	20	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	340
Surrogate recoveries:					
Fluorobiphenyl		109%	108%	111%	108%
o-Terphenyl		106%	104%	107%	108%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M - matrix interference
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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-16-S3	HCE-18-S1	HCE-22-S1	HCE-22-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
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		110%	109%	108%	111%
o-Terphenyl		105%	105%	106%	108%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M - matrix interference
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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-23-S1	Dupl HCE-23-S1
Matrix	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12
Kerosene/Jet fuel	20	nd	nd
Diesel/Fuel oil	20	nd	nd
Heavy oil	50	nd	nd
Surrogate recoveries:			
Fluorobiphenyl		110%	109%
o-Terphenyl		116%	114%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M - matrix interference
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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

8260B, µg/kg		MTH BLK	LCS	HCE-1-S2	HCE-1-S3	HCE-3-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
MTBE	100	nd		nd	nd	nd
Dichlorodifluoromethane	50	nd		nd	nd	nd
Chloromethane	50	nd		nd	nd	nd
Vinyl chloride	50	nd		nd	nd	nd
Bromomethane	50	nd		nd	nd	nd
Chloroethane	50	nd		nd	nd	nd
Trichlorofluoromethane	50	nd		nd	nd	nd
1,1-Dichloroethene	50	nd		nd	nd	nd
Methylene chloride	20	nd		nd	nd	nd
trans-1,2-Dichloroethene	50	nd		nd	nd	nd
1,1-Dichloroethane	50	nd		nd	nd	nd
2,2-Dichloropropane	50	nd		nd	nd	nd
cis-1,2-Dichloroethene	50	nd		nd	nd	nd
Chloroform	50	nd		nd	nd	nd
1,1,1-Trichloroethane	50	nd		nd	nd	nd
Carbontetrachloride	50	nd		nd	nd	nd
1,1-Dichloropropene	50	nd		nd	nd	nd
Benzene	20	nd	94%	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd		nd	nd	nd
Trichloroethene	20	nd	96%	nd	nd	nd
1,2-Dichloropropane	50	nd		nd	nd	nd
Dibromomethane	50	nd		nd	nd	nd
Bromodichloromethane	50	nd		nd	nd	nd
cis-1,3-Dichloropropene	50	nd		nd	nd	nd
Toluene	50	nd	97%	nd	nd	nd
trans-1,3-Dichloropropene	50	nd		nd	nd	nd
1,1,2-Trichloroethane	50	nd		nd	nd	nd
Tetrachloroethene	50	nd		nd	nd	nd
1,3-Dichloropropane	50	nd		nd	nd	nd
Dibromochloromethane	20	nd		nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd		nd	nd	nd
Chlorobenzene	50	nd	89%	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd
Xylenes	50	nd		nd	nd	nd
Styrene	50	nd		nd	nd	nd
Bromoform	50	nd		nd	nd	nd
Isopropylbenzene	50	nd		nd	nd	nd
1,2,3-Trichloropropane	50	nd		nd	nd	nd
Bromobenzene	50	nd		nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd	nd	nd
n-Propylbenzene	50	nd		nd	nd	nd
2-Chlorotoluene	50	nd		nd	nd	nd
4-Chlorotoluene	50	nd		nd	nd	nd
1,3,5-Trimethylbenzene	50	nd		nd	nd	nd
tert-Butylbenzene	50	nd		nd	nd	nd

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

AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

8260B, µg/kg		MTH BLK	LCS	HCE-1-S2	HCE-1-S3	HCE-3-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12	11/05/12
1,2,4-Trimethylbenzene	50	nd		nd	nd	nd
sec-Butylbenzene	50	nd		nd	nd	nd
1,3-Dichlorobenzene	50	nd		nd	nd	nd
Isopropyltoluene	50	nd		nd	nd	nd
1,4-Dichlorobenzene	50	nd		nd	nd	nd
1,2-Dichlorobenzene	50	nd		nd	nd	nd
n-Butylbenzene	50	nd		nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd	nd	nd
1,2,4-Trichlorobenzene	50	nd		nd	nd	nd
Hexachloro-1,3-butadiene	50	nd		nd	nd	nd
Naphtahlene	50	nd		nd	nd	nd
1,2,3-Trichlorobenzene	50	nd		nd	nd	nd
*-instrument detection limits						
Surrogate recoveries						
Dibromofluoromethane		105%	105%	101%	109%	102%
Toluene-d8		105%	102%	104%	116%	110%
1,2-Dichloroethane-d4		102%	101%	99%	103%	96%
4-Bromofluorobenzene		117%	114%	99%	95%	97%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

8260B, µg/kg		HCE-3-S3	HCE-4-S1	HCE-4-S3	HCE-6-S1
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd

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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

8260B, µg/kg		HCE-3-S3	HCE-4-S1	HCE-4-S3	HCE-6-S1
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	nd
sec-Butylbenzene	50	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		104%	99%	103%	107%
Toluene-d8		102%	105%	110%	110%
1,2-Dichloroethane-d4		102%	102%	99%	104%
4-Bromofluorobenzene		98%	90%	94%	110%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

8260B, µg/kg		HCE-6-S2	HCE-8-S3	HCE-14-S3	HCE-16-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd

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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

8260B, µg/kg		HCE-6-S2	HCE-8-S3	HCE-14-S3	HCE-16-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12	11/05/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	nd
sec-Butylbenzene	50	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		111%	106%	103%	108%
Toluene-d8		109%	113%	103%	111%
1,2-Dichloroethane-d4		97%	96%	101%	105%
4-Bromofluorobenzene		95%	99%	94%	111%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results		MS	MSD	RPD
8260B, µg/kg		**HCE-16-S2**	**HCE-16-S2**	**HCE-16-S2**
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12
MTBE	100			
Dichlorodifluoromethane	50			
Chloromethane	50			
Vinyl chloride	50			
Bromomethane	50			
Chloroethane	50			
Trichlorofluoromethane	50			
1,1-Dichloroethene	50			
Methylene chloride	20			
trans-1,2-Dichloroethene	50			
1,1-Dichloroethane	50			
2,2-Dichloropropane	50			
cis-1,2-Dichloroethene	50			
Chloroform	50			
1,1,1-Trichloroethane	50			
Carbontetrachloride	50			
1,1-Dichloropropene	50			
Benzene	20	100%	113%	12%
1,2-Dichloroethane(EDC)	20			
Trichloroethene	20	99%	109%	10%
1,2-Dichloropropane	50			
Dibromomethane	50			
Bromodichloromethane	50			
cis-1,3-Dichloropropene	50			
Toluene	50	99%	103%	4%
trans-1,3-Dichloropropene	50			
1,1,2-Trichloroethane	50			
Tetrachloroethene	50			
1,3-Dichloropropane	50			
Dibromochloromethane	20			
1,2-Dibromoethane (EDB)*	5			
Chlorobenzene	50	92%	95%	2%
1,1,1,2-Tetrachloroethane	50			
Ethylbenzene	50			
Xylenes	50			
Styrene	50			
Bromoform	50			
Isopropylbenzene	50			
1,2,3-Trichloropropane	50			
Bromobenzene	50			
1,1,2,2-Tetrachloroethane	50			
n-Propylbenzene	50			
2-Chlorotoluene	50			
4-Chlorotoluene	50			
1,3,5-Trimethylbenzene	50			
tert-Butylbenzene	50			

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results		MS	MSD	RPD
8260B, µg/kg		**HCE-16-S2**	**HCE-16-S2**	**HCE-16-S2**
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/05/12	11/05/12	11/05/12
Date analyzed	Limits	11/05/12	11/05/12	11/05/12
1,2,4-Trimethylbenzene	50			
sec-Butylbenzene	50			
1,3-Dichlorobenzene	50			
Isopropyltoluene	50			
1,4-Dichlorobenzene	50			
1,2-Dichlorobenzene	50			
n-Butylbenzene	50			
1,2-Dibromo-3-Chloropropane	50			
1,2,4-Trichlorobenzene	50			
Hexachloro-1,3-butadiene	50			
Naphtahlene	50			
1,2,3-Trichlorobenzene	50			
*-instrument detection limits				
Surrogate recoveries				
Dibromofluoromethane		105%	109%	
Toluene-d8		102%	107%	
1,2-Dichloroethane-d4		104%	104%	
4-Bromofluorobenzene		98%	102%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number: A21105-1
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Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Gx		MTH BLK	HCE-1-S2	HCE-3-S2	HCE-4-S1	HCE-4-S3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
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		82%	94%	87%	87%	86%
Bromofluorobenzene		93%	99%	95%	97%	95%

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

Advanced Analytical Laboratory
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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

NWTPH-Gx		HCE-6-S1	HCE-6-S2	HCE-8-S3	HCE-14-S3	HCE-16-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
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		84%	79%	83%	81%	70%
Bromofluorobenzene		90%	88%	90%	89%	89%

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

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results		Dupl
NWTPH-Gx		**HCE-16-S2**
Matrix	Soil	Soil
Date extracted	Reporting	11/06/12
Date analyzed	Limits	11/06/12
NWTPH-Gx, mg/kg		
Mineral spirits/Stoddard	5.0	nd
Gasoline	5.0	nd
Surrogate recoveries:		
Trifluorotoluene		95%
Bromofluorobenzene		102%

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

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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals (7010/7471), mg/kg		MTH BLK	LCS	HCE-1-S1	HCE-1-S2	HCE-3-S1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12	11/06/12
Lead (Pb)	1.0	nd	86%	7.3	nd	nd
Chromium (Cr)	2.0	nd	89%	4.3	3.1	nd
Cadmium (Cd)	1.0	nd	89%	nd	nd	nd
Arsenic (As)	2.0	nd	83%	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	79%	nd	nd	nd
Copper (Cu)	2.0	nd	107%	5.4	2.8	nd
Nickel (Ni)	1.0	nd	108%	1.7	1.1	nd
Zinc (Zn)	1.0	nd	125%	15	7.4	4.0

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%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Metals (7010/7471), mg/kg		**HCE-3-S2**	**HCE-4-S1**	**HCE-6-S1**	**HCE-8-S3**
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12
Lead (Pb)	1.0	nd	4.2	nd	nd
Chromium (Cr)	2.0	nd	nd	nd	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd
Copper (Cu)	2.0	nd	nd	nd	nd
Nickel (Ni)	1.0	nd	nd	nd	nd
Zinc (Zn)	1.0	1.5	4.5	3.9	4.0

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%

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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-10-S7	HCE-11-S7	HCE-12-S3	HCE-14-S3
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12
Lead (Pb)	1.0	1.9	1.9	1.2	1.1
Chromium (Cr)	2.0	nd	nd	nd	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd
Copper (Cu)	2.0	2.9	2.2	3.9	8.6
Nickel (Ni)	1.0	nd	nd	nd	nd
Zinc (Zn)	1.0	7.6	5.6	10	6.7

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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-16-S1	HCE-18-S1	HCE-19-S1	HCE-20-S1
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12	11/06/12
Lead (Pb)	1.0	1.4	34	1.7	nd
Chromium (Cr)	2.0	nd	150	2.2	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd
Copper (Cu)	2.0	nd	19	3.9	nd
Nickel (Ni)	1.0	1.0	2.0	nd	nd
Zinc (Zn)	1.0	3.7	54	5.6	2.8

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:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results		Dupl	RPD	MS
Metals (7010/7471), mg/kg		**HCE-20-S1**	**HCE-20-S1**	**HCE-20-S1**
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/06/12	11/06/12	11/06/12
Date analyzed	Limits	11/06/12	11/06/12	11/06/12
Lead (Pb)	1.0	nd		99%
Chromium (Cr)	2.0	nd		79%
Cadmium (Cd)	1.0	nd		98%
Arsenic (As)	2.0	nd		87%
Mercury (Hg) (7471)	0.5	nd		114%
Copper (Cu)	2.0	nd		
Nickel (Ni)	1.0	nd		
Zinc (Zn)	1.0	2.4	15%	

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: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals TCLP (1311/7010), mg/L		MTH BLK	LCS	HCE-8-S1	HCE-8-S2	HCE-10-S2
Matrix	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract
Date extracted	Reporting	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Date analyzed	Limits	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Lead (Pb)	0.002	nd	112%	0.005	0.005	0.007
Cadmium (Cd)	0.005	nd	117%	nd	nd	nd
Zinc (Zn)	0.01	nd	70%	0.05	0.01	0.33

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

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

AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals TCLP (1311/7010), mg/L		HCE-10-S4	HCE-11-S2	HCE-12-S1	HCE-12-S2
Matrix	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract
Date extracted	Reporting	11/07/12	11/07/12	11/07/12	11/07/12
Date analyzed	Limits	11/07/12	11/07/12	11/07/12	11/07/12
Lead (Pb)	0.002	nd	nd	nd	nd
Cadmium (Cd)	0.005	nd	nd	nd	nd
Zinc (Zn)	0.01	0.07	0.02	0.01	nd

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

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

AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results

Metals TCLP (1311/7010), mg/L		HCE-14-S1	HCE-14-S2	HCE-14-S2 Dupl	HCE-14-S2 RPD
Matrix	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract
Date extracted	Reporting	11/07/12	11/07/12	11/07/12	11/07/12
Date analyzed	Limits	11/07/12	11/07/12	11/07/12	11/07/12
Lead (Pb)	0.002	0.093	0.028	0.027	4%
Cadmium (Cd)	0.005	nd	nd	nd	
Zinc (Zn)	0.01	0.13	0.08	0.08	0%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number: A21105-1
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/05/12

Analytical Results		MS
Metals TCLP (1311/7010), mg/L		**HCE-14-S2**
Matrix	Soil Extract	Soil Extract
Date extracted	Reporting	11/07/12
Date analyzed	Limits	11/07/12
Lead (Pb)	0.002	70%
Cadmium (Cd)	0.005	96%
Zinc (Zn)	0.01	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Moisture, SM2540B	HCE-1-S1	HCE-1-S2	HCE-1-S3	HCE-3-S1	HCE-3-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	6.0%	7.5%	6.8%	6.6%	6.8%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Moisture, SM2540B	HCE-3-S3	HCE-4-S1	HCE-4-S3	HCE-6-S1	HCE-6-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	6.4%	8.9%	8.1%	9.3%	9.7%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Moisture, SM2540B	HCE-6-S3	HCE-8-S3	HCE-10-S7	HCE-11-S7
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	10%	12%	11%	9.7%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Moisture, SM2540B	HCE-12-S3	HCE-14-S3	HCE-15-S2	HCE-16-S1
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	11%	10%	13%	9.8%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

Moisture, SM2540B	HCE-16-S2	HCE-16-S3	HCE-18-S1	HCE-19-S1
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	9.0%	9.2%	11%	10%

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AAL Job Number:	A21105-1
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/05/12

Analytical Results

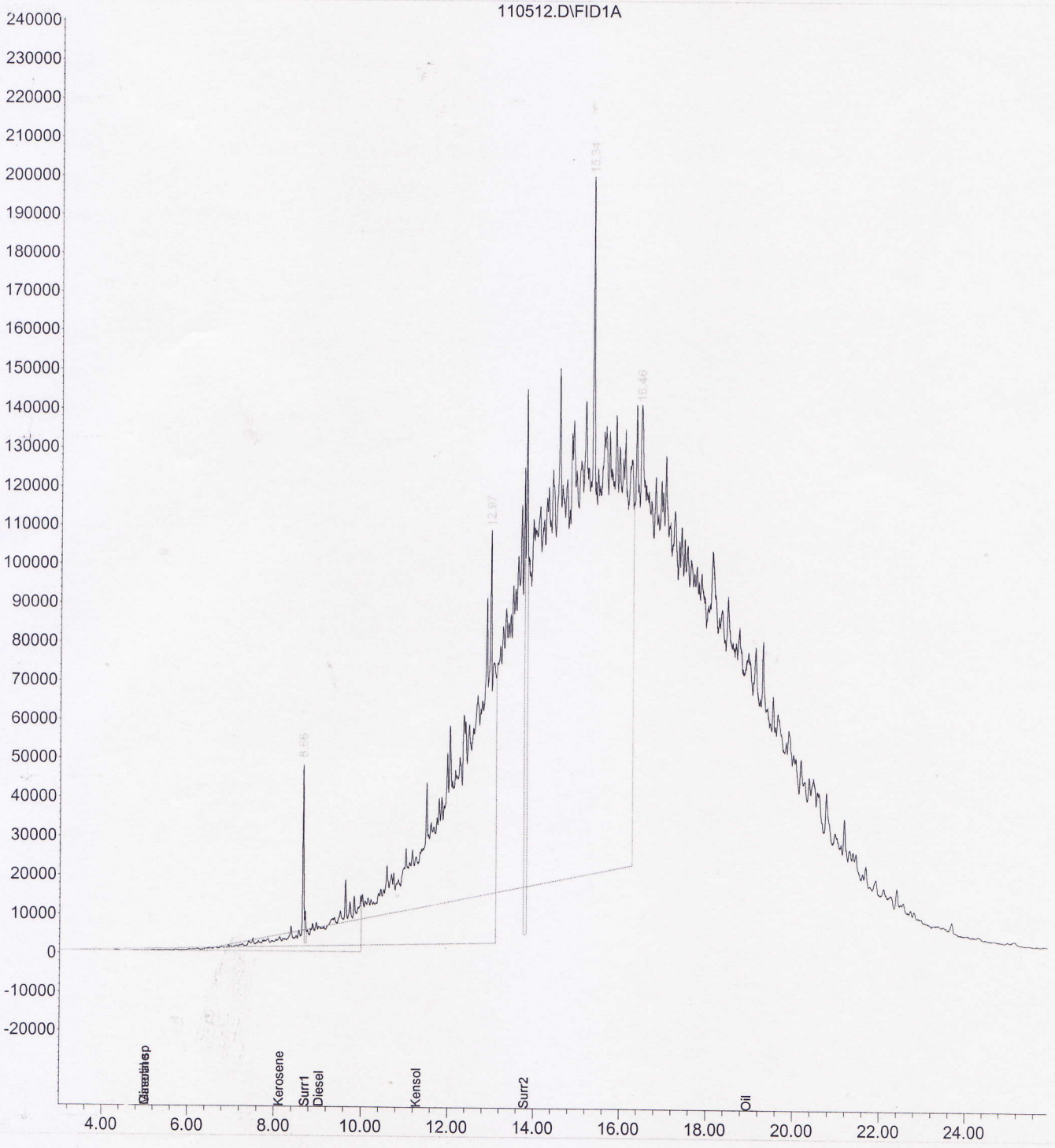
Moisture, SM2540B	HCE-20-S1	HCE-22-S1	HCE-22-S2	HCE-23-S1
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/07/12	11/07/12	11/07/12	11/07/12
Moisture, %	9.8%	10%	9.0%	9.0%

Quantitation Report (Not Reviewed)

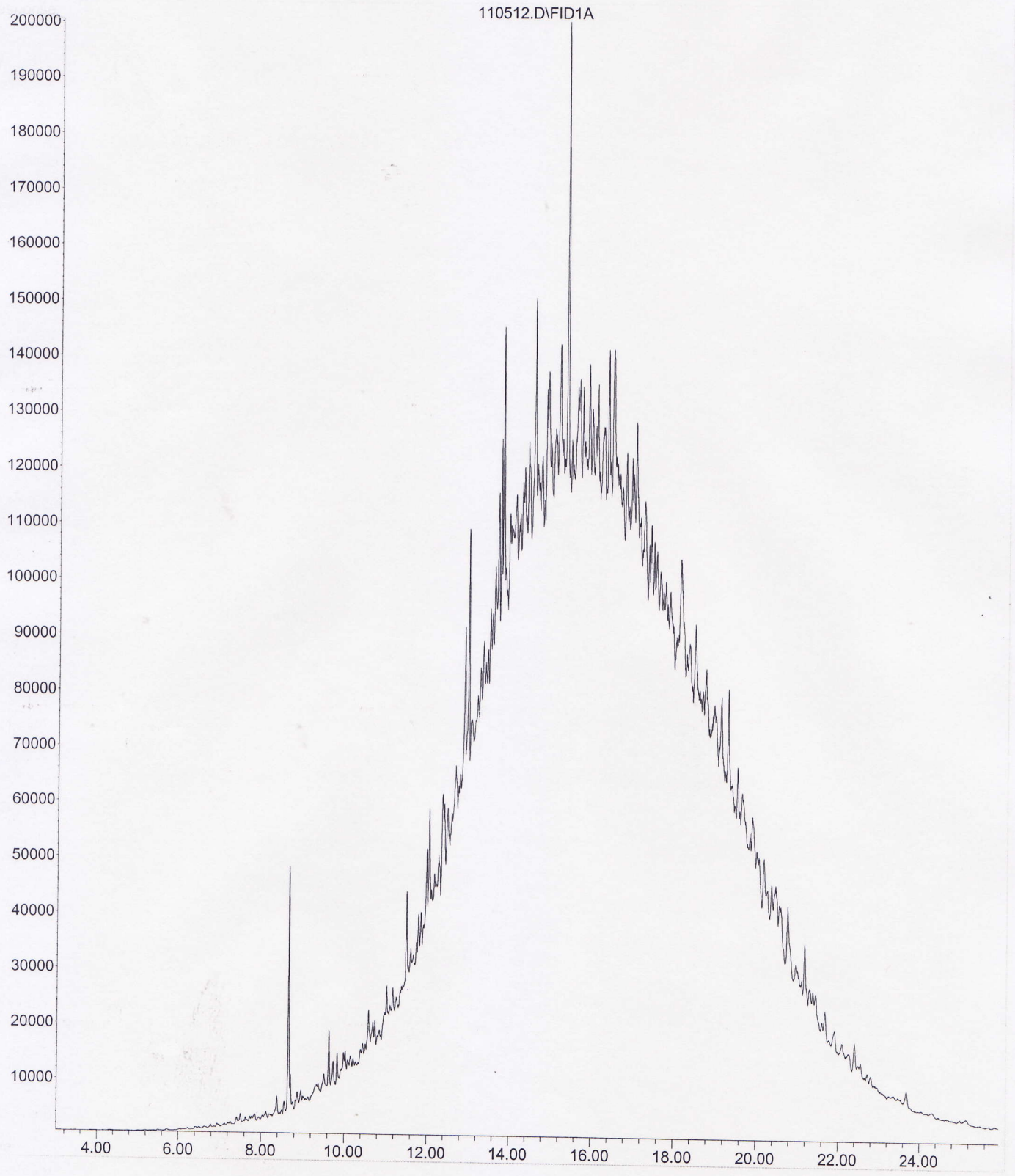
Data File : C:\HPCHEM\1\DATA\110512\110512.D Vial: 12
Acq On : 5 Nov 2012 9:58 pm Operator:
Sample : hce-6-s2 soil Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Nov 29 15:18 2012 Quant Results File: DX.RES

Quant Method : C:\HPCHEM\1\METHODS\DX.M (Chemstation Integrator)
Title :
Last Update : Sat Nov 17 15:50:58 2012
Response via : Single Level Calibration
DataAcq Meth : DX.M

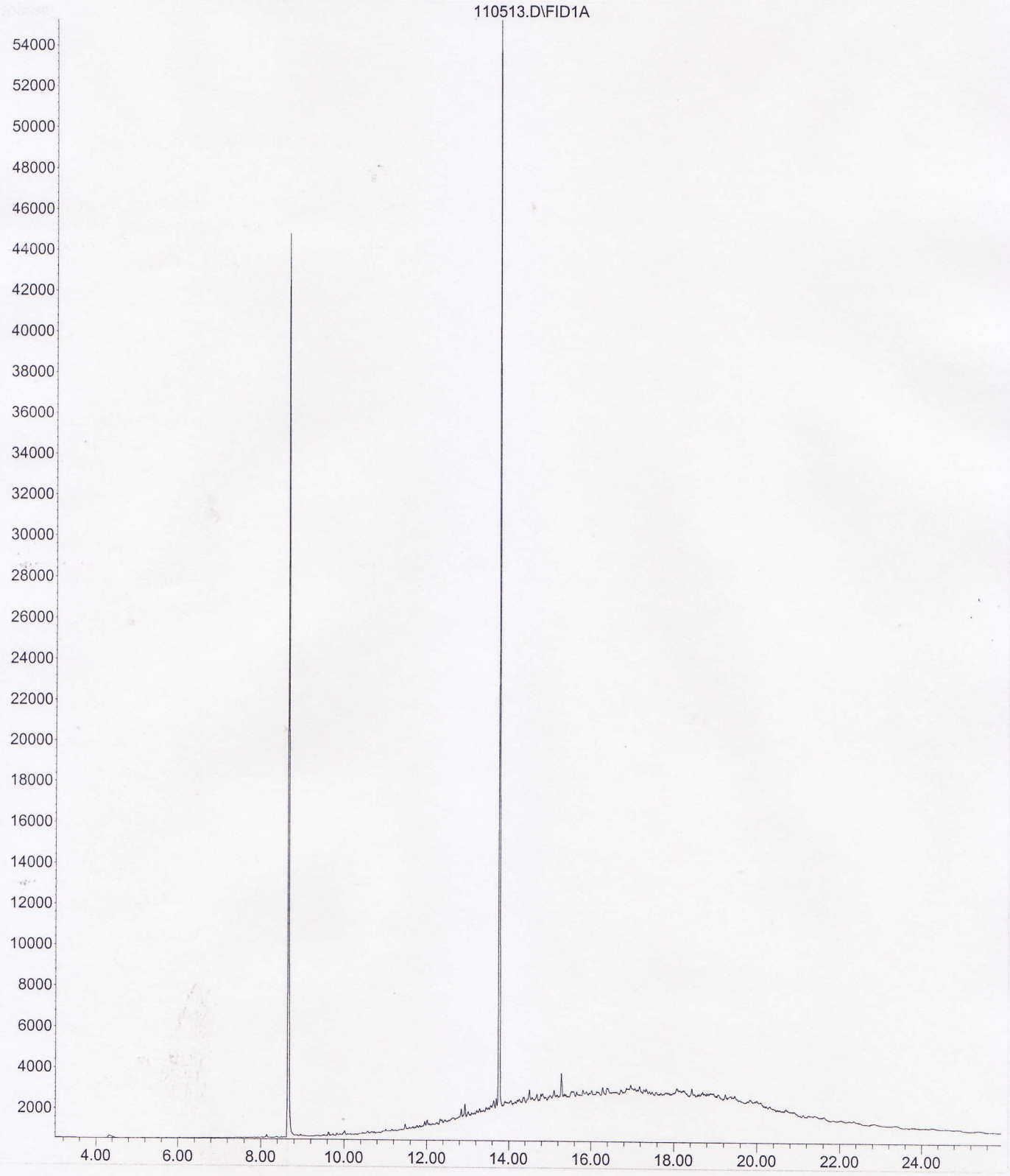
Volume Inj. :
Signal Phase :
Signal Info :



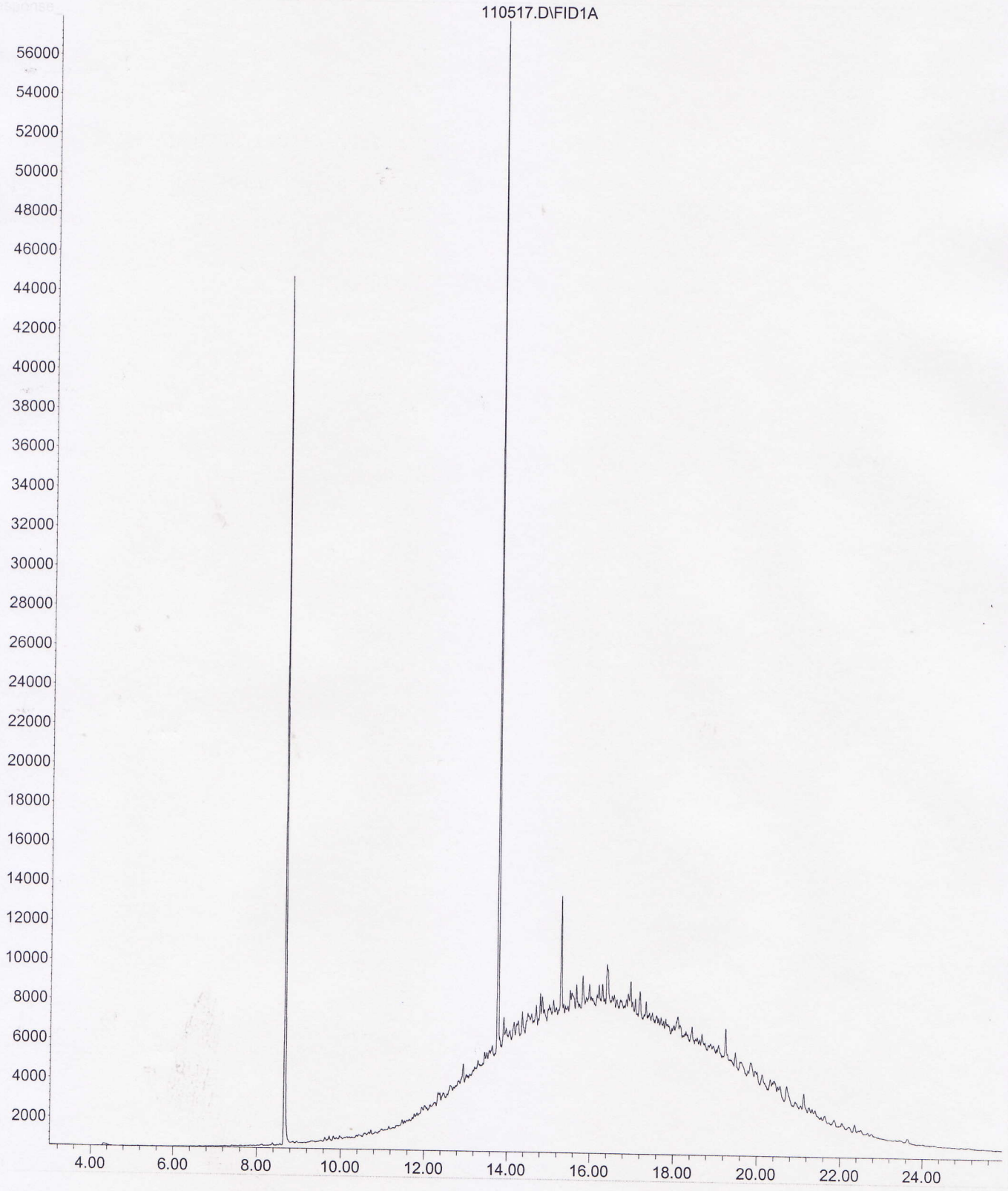
File : C:\HPCHEM\1\DATA\110512\110512.D
Operator :
Acquired : 5 Nov 2012 9:58 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-6-s2 soil
Misc Info :
Vial Number: 12



File : C:\HPCHEM\1\DATA\110512\110513.D
Operator :
Acquired : 5 Nov 2012 10:29 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-6-s3 soil
Misc Info :
Vial Number: 13



File : C:\HPCHEM\1\DATA\110512\110517.D
Operator :
Acquired : 6 Nov 2012 12:35 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-16-s2 soil
Misc Info :
Vial Number: 17



ADVANCED ANALYTICAL

Environmental Testing Laboratory

December 06, 2012

Julie Wukelic
Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, WA 98109

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *Former BMW, 17859-02* ***(A21119-2)*** Project.

Samples were received on *November 19, 2012*. 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) 497-0110.

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

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052
ph 425.497.0110 fax 425.497.8089
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

1 of 7

A21119-2 (1)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wyklicky
Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals *	% Moisture	TCLP (Pb, Cd, Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-2-S1	4oz jar; VOA	11/12/12	1640	Soil	X		X	X	X		2	
	HCE-2-S2			1646					X	X		2	
	HCE-2-S3			1654		X		X		X		2	
	HCE-2-S4			1702								2	Hold
	HCE-2-S5			1728		X		X		X		2	
	HCE-2-S6			1740								2	Hold
	HCE-2-S7			1749		X	X	X		X		2	
	HCE-2-S8			1758		X	X	X		X		2	
	HCE-5-S1		11/13/12	0825		X	X	X	X	X		2	
	HCE-5-S2			0833		X	X		X	X		2	
	HCE-5-S3			0842		X			X	X		2	
	HCE-5-S4			0853		X			X	X		2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/19/12	V. Franov	11/19/12
PRINT NAME Angie Goodwin	TIME 1500	PRINT NAME VAL FRANOV	TIME 16:00
COMPANY HC		COMPANY AAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Tot. Metals: Pb, Cr, Cd, As, Hg, Cu, Ni, Zn (HC MTCA Metals)

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

24 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: AAL

2 of 7

A21119-2 (2)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wikelic / Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals & %Moisture	TCLP (Pb, Cd, Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-5-S5	4oz jar; VOA	11/13/12	0906	Soil						2	Hold
	HCE-5-S6			0922							2	Hold
	HCE-5-S7			0937				X	X		2	
	HCE-5-S8			0950							2	Hold
	HCE-7-S1		11/12/12	0957						X	2	
	HCE-7-S2			1005		X	X	X	X	X	2	
	HCE-7-S3			1010		X	X	X	X		2	
	HCE-7-S4			1030		X	X	X	X		2	
	HCE-7-S5			1030		X	X	X	X		2	
	HCE-7-S6			1054		X	X	X	X		2	
	HCE-7-S7			1105							2	Hold
	HCE-7-S8			1115		X			X		2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/19/12	SIGNATURE V. Frazier	11/19/12
PRINT NAME Angie Goodwin	TIME 1500	PRINT NAME V. Frazier	TIME 16:00
COMPANY HC		COMPANY AAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Tot Metals (HC RCRA Metals)

24 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

Samples Shipped to: AAL

387

A21119-2 (3)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic ; Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals *	% Moisture	TCLP (Pb, Cd, Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HLE-7-S9	4oz jar; VOA	11/12/12	1125	Soil	X				X		2	
	HLE-7-S10			1135		X				X		2	
	HLE-9-S1			1333							X	2	
	HLE-9-S2			1342							X	2	
	HLE-9-S3			1348					X	X		2	
	HLE-9-S4			1405 (MS)					X	X		2	
	HLE-9-S5			~~1432~~ 1420					X	X		2	
	HLE-9-S6			~~1438~~ 1432								2	Hold
	HLE-9-S7			1438								2	Hold
	HLE-9-S8			1445								2	Hold
	HLE-9-S9			1455								2	Hold
	HLE-13-S1			1030							X	2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Angie Goodwin	11/19/12	V. Ivanov	11/19/12
SIGNATURE	TIME	SIGNATURE	TIME
Angie Goodwin	1500	Vic Ivanov	16:00
PRINT NAME		PRINT NAME	
HC		AAL	
COMPANY		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* HC RCRA Metals

24 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

Samples Shipped to: HAL

4 of 7

A21119-2

(4)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wykell; Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals	% Moisture	TCLP (Pb/Cd Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HCE-13-S2	4oz jar; VOA	11/12/12	1047	Soil						X	2	
	HCE-13-S3			1055					X	X		2	
	HCE-13-S4			1106					X	X		2	
	HCE-13-S5			1115					X	X		2	
	HCE-13-S6			1128								2	Hold
	HCE-13-S7			1139								2	Hold
	HCE-13-S8			1144		X				X		2	
	HCE-13-S9			1154		X				X		2	
	HCE-13-S10			1214		X				X		2	
	HCE-17-S1			1325		X			X	X		2	
	HCE-17-S2			1329		X	X	X	X	X		2	
	HCE-17-S3			1340		X	X	X		X		2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/19/12	SIGNATURE V. Thomas	11/19/12
PRINT NAME Angie Goodwin	TIME 1500	PRINT NAME VAL PARKER	TIME 16:00
COMPANY HC		COMPANY HC	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* HC RCRA Metals

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

24 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: AAL

567

A21119-2 (5)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic; Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals*	% Moisture	TCLP (Pb, Cd, Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	HLE-17-S4	4oz jar; VOA	11/12/12	1351	Soil	X				X		2	
	HLE-17-S5			1417								2	Hold
	HLE-17-S6			1432								2	Hold
	HLE-17-S7			1444								2	Hold
	HLE-17-S8			1455			X	X		X		2	
	HLE-21-S2		11/13/12	1147		X			X	X		2	
	HLE-21-S3			1154		X			X	X		2	
	HLE-21-S4			1204		X				X		2	
	HLE-21-S5			1213		X	X	X		X		2	
	HLE-21-S6			1225								2	Hold
	HLE-21-S7			1233			X	X		X		2	
	HLE-21-S8			1244								2	Hold

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Angie Goodwin	11/19/12	SIGNATURE V. Pierson	11/19/12
PRINT NAME Angie Goodwin	TIME	PRINT NAME V. PIERSON	TIME
COMPANY HC	1500	COMPANY AAL	16:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

AHL RCRA Metals

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

24 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: AAL

6 of 7

A211192

(6)

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic / Angie Goodwin

SAMPLED BY: MM / PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals*	% Moisture	TCLP (Pb, Cd, Zn)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-1-S1	4oz jars; VOA	11/16/12	0850	Soil	X		X	X	X		2	
	MW-1-S2			0902					X	X		2	
	MW-1-S3			0910								2	Hold
	MW-1-S4			0922								2	Hold
	MW-1-S5			0937								2	Hold
	MW-1-S6			0945								2	Hold
	MW-1-S7			0956								2	Hold
	MW-1-S8			1006		X	X	X	X	X		2	
	~~MW-1-S9~~			~~1016~~									No Sample
	MW-1-S10			1042		X	X	X		X		2	
	~~MW-1-S11~~			~~1100~~									No Sample
	MW-2-S1		11/15/12	1218							X	2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Angie Goodwin	11/19/12	V. Pranger	11/19/12
SIGNATURE	TIME	SIGNATURE	TIME
Angie Goodwin	1500	V. Pranger	16:00
PRINT NAME		PRINT NAME	
HC		AAL	
COMPANY		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* HC RCRA Metals

20 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

7 of 7

A21119-2

(7)

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 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic & Angie Goodwin

SAMPLED BY: MM/PK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NWTPH-Dx	NWTPH-Gx	VOCs (8260B)	Metals	% Moisture	TCLP (Pb, Cd, As)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-2-S2	4 oz jar; VOA	11/15/12	1243	Soil	X	X		X	X		2	
	MW-2-S3			1252		X	X		X	X		2	
	MW-2-S4			1258		X	X	X	X	X		2	
	MW-2-S5			1310		X	X	X	X	X		2	
	MW-2-S6			1319		X	X	X		X		2	
	MW-2-S7			1333		X		X		X		2	
	MW-2-S8			1342		X				X		2	
	MW-2-S10			1406		X				X		2	
	MW-2-S12			1443								2	Hold
	MW-2-S14			1517								2	Hold

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Angie Goodwin	11/19/12	V. Brauer	11/19/12
SIGNATURE	TIME	SIGNATURE	TIME
Angie Goodwin	1500	[illegible]	16:00
PRINT NAME		PRINT NAME	
HC		AAL	
COMPANY		COMPANY	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

A HC KCRA Metals

20 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:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

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

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	MTH BLK	HCE-2-S1	HCE-2-S3	HCE-2-S5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/20/12	11/20/12	11/20/12	11/20/12
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		101%	117%	106%	106%	107%
o-Terphenyl		103%	114%	106%	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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-2-S5	HCE-2-S7	HCE-2-S8	HCE-5-S1	HCE-5-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/19/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/19/12	11/20/12
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		101%	105%	104%	108%	107%
o-Terphenyl		98%	105%	103%	110%	110%

Dupl

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-5-S3	HCE-5-S4	HCE-7-S2	HCE-7-S3	HCE-7-S4
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/20/12	11/20/12	11/19/12	11/19/12	11/19/12
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	4,400	5,500	960
Heavy oil	50	nd	nd	nd	nd	350
Surrogate recoveries:						
Fluorobiphenyl		107%	110%	C	C	121%
o-Terphenyl		105%	122%	C	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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-7-S5	HCE-7-S6	HCE-7-S8	HCE-7-S9	HCE-7-S10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12	11/19/12
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	3,400	32	nd	nd	nd
Heavy oil	50	1,200	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		C	106%	104%	105%	106%
o-Terphenyl		C	104%	101%	102%	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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-13-S8	HCE-13-S9	HCE-13-S10	HCE-17-S1
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
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		104%	105%	104%	104%
o-Terphenyl		102%	102%	102%	102%

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-17-S2	HCE-17-S3	HCE-17-S4	HCE-21-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/20/12	11/20/12
Kerosene/Jet fuel	20	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd
Heavy oil	50	640	1,500	68	nd
Surrogate recoveries:					
Fluorobiphenyl		109%	110%	108%	109%
o-Terphenyl		C	C	106%	107%

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		HCE-21-S3	HCE-21-S4	HCE-21-S5	HCE-21-S5 Dupl	MW-1-S1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
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		125%	104%	104%	108%	109%
o-Terphenyl		126%	102%	101%	105%	106%

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		MW-1-S8	MW-1-S10	MW-2-S2	MW-2-S3	MW-2-S4
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	180	390	420
Heavy oil	50	nd	nd	130	270	230
Surrogate recoveries:						
Fluorobiphenyl		104%	105%	104%	119%	113%
o-Terphenyl		102%	102%	102%	130%	125%

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Dx, mg/kg		MW-2-S5	MW-2-S6	MW-2-S7	MW-2-S8	MW-2-S10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12	11/20/12
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	20	24	nd	44	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		106%	107%	128%	128%	106%
o-Terphenyl		103%	104%	125%	129%	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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results		Dupl
NWTPH-Dx, mg/kg		**MW-2-S10**
Matrix	Soil	Soil
Date extracted	Reporting	11/20/12
Date analyzed	Limits	11/20/12
Kerosene/Jet fuel	20	nd
Diesel/Fuel oil	20	nd
Heavy oil	50	nd
Surrogate recoveries:		
Fluorobiphenyl		105%
o-Terphenyl		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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		MTH BLK	LCS	MTH BLK	LCS	HCE-2-S1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/20/12	11/20/12	11/20/12
MTBE	100	nd		nd		nd
Dichlorodifluoromethane	50	nd		nd		nd
Chloromethane	50	nd		nd		nd
Vinyl chloride	50	nd		nd		nd
Bromomethane	50	nd		nd		nd
Chloroethane	50	nd		nd		nd
Trichlorofluoromethane	50	nd		nd		nd
1,1-Dichloroethene	50	nd		nd		nd
Methylene chloride	20	nd		nd		nd
trans-1,2-Dichloroethene	50	nd		nd		nd
1,1-Dichloroethane	50	nd		nd		nd
2,2-Dichloropropane	50	nd		nd		nd
cis-1,2-Dichloroethene	50	nd		nd		nd
Chloroform	50	nd		nd		nd
1,1,1-Trichloroethane	50	nd		nd		nd
Carbontetrachloride	50	nd		nd		nd
1,1-Dichloropropene	50	nd		nd		nd
Benzene	20	nd	78%	nd	98%	nd
1,2-Dichloroethane(EDC)	20	nd		nd		nd
Trichloroethene	20	nd	80%	nd	91%	nd
1,2-Dichloropropane	50	nd		nd		nd
Dibromomethane	50	nd		nd		nd
Bromodichloromethane	50	nd		nd		nd
cis-1,3-Dichloropropene	50	nd		nd		nd
Toluene	50	nd	90%	nd	87%	nd
trans-1,3-Dichloropropene	50	nd		nd		nd
1,1,2-Trichloroethane	50	nd		nd		nd
Tetrachloroethene	50	nd		nd		nd
1,3-Dichloropropane	50	nd		nd		nd
Dibromochloromethane	20	nd		nd		nd
1,2-Dibromoethane (EDB)*	5	nd		nd		nd
Chlorobenzene	50	nd	86%	nd	86%	nd
1,1,1,2-Tetrachloroethane	50	nd		nd		nd
Ethylbenzene	50	nd		nd		nd
Xylenes	50	nd		nd		nd
Styrene	50	nd		nd		nd
Bromoform	50	nd		nd		nd
Isopropylbenzene	50	nd		nd		nd
1,2,3-Trichloropropane	50	nd		nd		nd
Bromobenzene	50	nd		nd		nd
1,1,2,2-Tetrachloroethane	50	nd		nd		nd
n-Propylbenzene	50	nd		nd		nd
2-Chlorotoluene	50	nd		nd		nd
4-Chlorotoluene	50	nd		nd		nd
1,3,5-Trimethylbenzene	50	nd		nd		nd
tert-Butylbenzene	50	nd		nd		nd

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		MTH BLK	LCS	MTH BLK	LCS	HCE-2-S1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/20/12	11/20/12	11/20/12
1,2,4-Trimethylbenzene	50	nd		nd		nd
sec-Butylbenzene	50	nd		nd		nd
1,3-Dichlorobenzene	50	nd		nd		nd
Isopropyltoluene	50	nd		nd		nd
1,4-Dichlorobenzene	50	nd		nd		nd
1,2-Dichlorobenzene	50	nd		nd		nd
n-Butylbenzene	50	nd		nd		nd
1,2-Dibromo-3-Chloropropane	50	nd		nd		nd
1,2,4-Trichlorobenzene	50	nd		nd		nd
Hexachloro-1,3-butadiene	50	nd		nd		nd
Naphtahlene	50	nd		nd		nd
1,2,3-Trichlorobenzene	50	nd		nd		nd
*-instrument detection limits						
Surrogate recoveries						
Dibromofluoromethane		103%	96%	124%	104%	119%
Toluene-d8		108%	101%	99%	112%	100%
1,2-Dichloroethane-d4		106%	99%	84%	95%	71%
4-Bromofluorobenzene		111%	107%	121%	113%	110%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-2-S3	HCE-2-S5	HCE-2-S7	HCE-2-S8
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-2-S3	HCE-2-S5	HCE-2-S7	HCE-2-S8
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	nd
sec-Butylbenzene	50	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		101%	102%	104%	99%
Toluene-d8		107%	109%	114%	110%
1,2-Dichloroethane-d4		98%	96%	94%	100%
4-Bromofluorobenzene		103%	96%	98%	95%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-5-S1	HCE-5-S7	HCE-7-S2	HCE-7-S3
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	180	1,100
Xylenes	50	nd	nd	320	2,500
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	180	1,100
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	500	2,300
2-Chlorotoluene	50	nd	nd	85	86
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	830	4,700
tert-Butylbenzene	50	nd	nd	1,000	140

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-5-S1	HCE-5-S7	HCE-7-S2	HCE-7-S3
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
1,2,4-Trimethylbenzene	50	nd	nd	6,700	29,000
sec-Butylbenzene	50	nd	nd	4,800	1,700
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	600	2,100
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	610	2,100
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		103%	100%	99%	93%
Toluene-d8		116%	112%	109%	103%
1,2-Dichloroethane-d4		103%	97%	102%	102%
4-Bromofluorobenzene		100%	93%	97%	108%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-7-S4	HCE-7-S5	HCE-7-S6	HCE-17-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	800	140	nd	nd
Xylenes	50	2,500	420	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	200	140	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	1,300	200	nd	nd
2-Chlorotoluene	50	160	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	2,000	320	nd	nd
tert-Butylbenzene	50	67	nd	nd	nd

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-7-S4	HCE-7-S5	HCE-7-S6	HCE-17-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
1,2,4-Trimethylbenzene	50	10,000	1,500	nd	nd
sec-Butylbenzene	50	1,000	170	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	1,400	220	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	1,900	280	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		105%	94%	108%	101%
Toluene-d8		111%	100%	110%	105%
1,2-Dichloroethane-d4		110%	106%	96%	101%
4-Bromofluorobenzene		124%	101%	107%	104%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

8260B, µg/kg		HCE-17-S3	HCE-17-S8	HCE-21-S5	HCE-21-S7
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	nd
2-Chlorotoluene	50	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

8260B, µg/kg		HCE-17-S3	HCE-17-S8	HCE-21-S5	HCE-21-S7
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	nd
sec-Butylbenzene	50	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		101%	98%	109%	99%
Toluene-d8		92%	104%	108%	113%
1,2-Dichloroethane-d4		101%	100%	102%	101%
4-Bromofluorobenzene		96%	97%	96%	94%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

8260B, µg/kg		MW-1-S1	MW-1-S8	MW-1-S10	MW-2-S4
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12
MTBE	100	nd	nd	nd	nd
Dichlorodifluoromethane	50	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd
Benzene	20	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd
Tetrachloroethene	50	nd	nd	nd	nd
1,3-Dichloropropane	50	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd
Styrene	50	nd	nd	nd	nd
Bromoform	50	nd	nd	nd	nd
Isopropylbenzene	50	nd	nd	nd	73
1,2,3-Trichloropropane	50	nd	nd	nd	nd
Bromobenzene	50	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd	nd	nd
n-Propylbenzene	50	nd	nd	nd	79
2-Chlorotoluene	50	nd	nd	nd	nd
4-Chlorotoluene	50	nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd	nd	nd
tert-Butylbenzene	50	nd	nd	nd	nd

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

8260B, µg/kg		MW-1-S1	MW-1-S8	MW-1-S10	MW-2-S4
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/20/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	110
sec-Butylbenzene	50	nd	nd	nd	330
1,3-Dichlorobenzene	50	nd	nd	nd	nd
Isopropyltoluene	50	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd
n-Butylbenzene	50	nd	nd	nd	120
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd	nd	nd
Naphtahlene	50	nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd	nd	nd
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		98%	118%	102%	92%
Toluene-d8		112%	118%	107%	103%
1,2-Dichloroethane-d4		98%	97%	99%	96%
4-Bromofluorobenzene		103%	105%	98%	106%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

8260B, µg/kg		MW-2-S5	MW-2-S6	MW-2-S7	HCE-17-S3	MS
Matrix	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/19/12	
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/19/12	
MTBE	100	nd	nd	nd		
Dichlorodifluoromethane	50	nd	nd	nd		
Chloromethane	50	nd	nd	nd		
Vinyl chloride	50	nd	nd	nd		
Bromomethane	50	nd	nd	nd		
Chloroethane	50	nd	nd	nd		
Trichlorofluoromethane	50	nd	nd	nd		
1,1-Dichloroethene	50	nd	nd	nd		
Methylene chloride	20	nd	nd	nd		
trans-1,2-Dichloroethene	50	nd	nd	nd		
1,1-Dichloroethane	50	nd	nd	nd		
2,2-Dichloropropane	50	nd	nd	nd		
cis-1,2-Dichloroethene	50	nd	nd	nd		
Chloroform	50	nd	nd	nd		
1,1,1-Trichloroethane	50	nd	nd	nd		
Carbontetrachloride	50	nd	nd	nd		
1,1-Dichloropropene	50	nd	nd	nd		
Benzene	20	nd	nd	nd		96%
1,2-Dichloroethane(EDC)	20	nd	nd	nd		
Trichloroethene	20	nd	nd	nd		95%
1,2-Dichloropropane	50	nd	nd	nd		
Dibromomethane	50	nd	nd	nd		
Bromodichloromethane	50	nd	nd	nd		
cis-1,3-Dichloropropene	50	nd	nd	nd		
Toluene	50	nd	nd	nd		82%
trans-1,3-Dichloropropene	50	nd	nd	nd		
1,1,2-Trichloroethane	50	nd	nd	nd		
Tetrachloroethene	50	nd	nd	nd		
1,3-Dichloropropane	50	nd	nd	nd		
Dibromochloromethane	20	nd	nd	nd		
1,2-Dibromoethane (EDB)*	5	nd	nd	nd		
Chlorobenzene	50	nd	nd	nd		87%
1,1,1,2-Tetrachloroethane	50	nd	nd	nd		
Ethylbenzene	50	nd	nd	nd		
Xylenes	50	nd	nd	nd		
Styrene	50	nd	nd	nd		
Bromoform	50	nd	nd	nd		
Isopropylbenzene	50	nd	nd	nd		
1,2,3-Trichloropropane	50	nd	nd	nd		
Bromobenzene	50	nd	nd	nd		
1,1,2,2-Tetrachloroethane	50	nd	nd	nd		
n-Propylbenzene	50	nd	nd	nd		
2-Chlorotoluene	50	nd	nd	nd		
4-Chlorotoluene	50	nd	nd	nd		
1,3,5-Trimethylbenzene	50	nd	nd	nd		
tert-Butylbenzene	50	nd	nd	nd		

AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results MS

8260B, µg/kg		MW-2-S5	MW-2-S6	MW-2-S7	HCE-17-S3
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/19/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/19/12
1,2,4-Trimethylbenzene	50	nd	nd	nd	
sec-Butylbenzene	50	nd	nd	nd	
1,3-Dichlorobenzene	50	nd	nd	nd	
Isopropyltoluene	50	nd	nd	nd	
1,4-Dichlorobenzene	50	nd	nd	nd	
1,2-Dichlorobenzene	50	nd	nd	nd	
n-Butylbenzene	50	79	nd	nd	
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd	
1,2,4-Trichlorobenzene	50	nd	nd	nd	
Hexachloro-1,3-butadiene	50	nd	nd	nd	
Naphtahlene	50	nd	nd	nd	
1,2,3-Trichlorobenzene	50	nd	nd	nd	
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		100%	103%	96%	104%
Toluene-d8		106%	102%	102%	106%
1,2-Dichloroethane-d4		94%	98%	95%	104%
4-Bromofluorobenzene		111%	97%	98%	111%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results		MSD	RPD	MS	MSD
8260B, µg/kg		**HCE-17-S3**	**HCE-17-S3**	**MW-1-S10**	**MW-1-S10**
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/20/12	11/20/12
MTBE	100				
Dichlorodifluoromethane	50				
Chloromethane	50				
Vinyl chloride	50				
Bromomethane	50				
Chloroethane	50				
Trichlorofluoromethane	50				
1,1-Dichloroethene	50				
Methylene chloride	20				
trans-1,2-Dichloroethene	50				
1,1-Dichloroethane	50				
2,2-Dichloropropane	50				
cis-1,2-Dichloroethene	50				
Chloroform	50				
1,1,1-Trichloroethane	50				
Carbontetrachloride	50				
1,1-Dichloropropene	50				
Benzene	20	100%	4%	85%	91%
1,2-Dichloroethane(EDC)	20				
Trichloroethene	20	95%	1%	83%	90%
1,2-Dichloropropane	50				
Dibromomethane	50				
Bromodichloromethane	50				
cis-1,3-Dichloropropene	50				
Toluene	50	90%	9%	82%	91%
trans-1,3-Dichloropropene	50				
1,1,2-Trichloroethane	50				
Tetrachloroethene	50				
1,3-Dichloropropane	50				
Dibromochloromethane	20				
1,2-Dibromoethane (EDB)*	5				
Chlorobenzene	50	92%	6%	81%	94%
1,1,1,2-Tetrachloroethane	50				
Ethylbenzene	50				
Xylenes	50				
Styrene	50				
Bromoform	50				
Isopropylbenzene	50				
1,2,3-Trichloropropane	50				
Bromobenzene	50				
1,1,2,2-Tetrachloroethane	50				
n-Propylbenzene	50				
2-Chlorotoluene	50				
4-Chlorotoluene	50				
1,3,5-Trimethylbenzene	50				
tert-Butylbenzene	50				

AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results		MSD	RPD	MS	MSD
8260B, µg/kg		**HCE-17-S3**	**HCE-17-S3**	**MW-1-S10**	**MW-1-S10**
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/20/12	11/20/12
1,2,4-Trimethylbenzene	50				
sec-Butylbenzene	50				
1,3-Dichlorobenzene	50				
Isopropyltoluene	50				
1,4-Dichlorobenzene	50				
1,2-Dichlorobenzene	50				
n-Butylbenzene	50				
1,2-Dibromo-3-Chloropropane	50				
1,2,4-Trichlorobenzene	50				
Hexachloro-1,3-butadiene	50				
Naphtahlene	50				
1,2,3-Trichlorobenzene	50				
*-instrument detection limits					
Surrogate recoveries					
Dibromofluoromethane		103%		101%	99%
Toluene-d8		109%		103%	101%
1,2-Dichloroethane-d4		99%		100%	98%
4-Bromofluorobenzene		122%		103%	108%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results		RPD
8260B, µg/kg		**MW-1-S10**
Matrix	Soil	Soil
Date extracted	Reporting	11/20/12
Date analyzed	Limits	11/20/12
MTBE	100	
Dichlorodifluoromethane	50	
Chloromethane	50	
Vinyl chloride	50	
Bromomethane	50	
Chloroethane	50	
Trichlorofluoromethane	50	
1,1-Dichloroethene	50	
Methylene chloride	20	
trans-1,2-Dichloroethene	50	
1,1-Dichloroethane	50	
2,2-Dichloropropane	50	
cis-1,2-Dichloroethene	50	
Chloroform	50	
1,1,1-Trichloroethane	50	
Carbontetrachloride	50	
1,1-Dichloropropene	50	
Benzene	20	7%
1,2-Dichloroethane(EDC)	20	
Trichloroethene	20	8%
1,2-Dichloropropane	50	
Dibromomethane	50	
Bromodichloromethane	50	
cis-1,3-Dichloropropene	50	
Toluene	50	10%
trans-1,3-Dichloropropene	50	
1,1,2-Trichloroethane	50	
Tetrachloroethene	50	
1,3-Dichloropropane	50	
Dibromochloromethane	20	
1,2-Dibromoethane (EDB)*	5	
Chlorobenzene	50	14%
1,1,1,2-Tetrachloroethane	50	
Ethylbenzene	50	
Xylenes	50	
Styrene	50	
Bromoform	50	
Isopropylbenzene	50	
1,2,3-Trichloropropane	50	
Bromobenzene	50	
1,1,2,2-Tetrachloroethane	50	
n-Propylbenzene	50	
2-Chlorotoluene	50	
4-Chlorotoluene	50	
1,3,5-Trimethylbenzene	50	
tert-Butylbenzene	50	

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results		RPD
8260B, µg/kg		**MW-1-S10**
Matrix	Soil	Soil
Date extracted	Reporting	11/20/12
Date analyzed	Limits	11/20/12
1,2,4-Trimethylbenzene	50	
sec-Butylbenzene	50	
1,3-Dichlorobenzene	50	
Isopropyltoluene	50	
1,4-Dichlorobenzene	50	
1,2-Dichlorobenzene	50	
n-Butylbenzene	50	
1,2-Dibromo-3-Chloropropane	50	
1,2,4-Trichlorobenzene	50	
Hexachloro-1,3-butadiene	50	
Naphtahlene	50	
1,2,3-Trichlorobenzene	50	
*-instrument detection limits		
Surrogate recoveries		
Dibromofluoromethane		
Toluene-d8		
1,2-Dichloroethane-d4		
4-Bromofluorobenzene		

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

					Dupl	
NWTPH-Gx		**MTH BLK**	**MTH BLK**	**HCE-2-S7**	**HCE-2-S7**	**HCE-2-S8**
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/20/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/20/12	11/19/12	11/19/12	11/19/12
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		109%	117%	111%	102%	106%
Bromofluorobenzene		101%	124%	102%	102%	102%

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

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Gx		HCE-5-S1	HCE-5-S2	HCE-7-S2	HCE-7-S3	HCE-7-S4
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/20/12	11/20/12	11/20/12	11/20/12
Date analyzed	Limits	11/19/12	11/20/12	11/20/12	11/20/12	11/20/12
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	140	410	220
Surrogate recoveries:						
Trifluorotoluene		109%	106%	107%	113%	121%
Bromofluorobenzene		98%	98%	99%	80%	99%

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

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AAL Job Number: A21119-2
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Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Gx		HCE-7-S5	HCE-7-S6	HCE-17-S2	HCE-17-S3	HCE-17-S8
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12	11/19/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12	11/19/12
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	64	nd	nd	nd	nd
Surrogate recoveries:						
Trifluorotoluene		101%	125%	96%	98%	103%
Bromofluorobenzene		92%	107%	90%	94%	97%

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

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Gx		HCE-21-S5	HCE-21-S7	MW-1-S8	MW-1-S10	MW-2-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/12	11/19/12	11/19/12	11/19/12	11/20/12
Date analyzed	Limits	11/19/12	11/19/12	11/19/12	11/19/12	11/20/12
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd	220
Surrogate recoveries:						
Trifluorotoluene		102%	103%	93%	94%	102%
Bromofluorobenzene		97%	99%	91%	91%	87%

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

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

NWTPH-Gx		MW-2-S3	MW-2-S4	MW-2-S5	MW-2-S6	Dupl MW-2-S6
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/20/12	11/20/12	11/20/12	11/19/12	11/19/12
Date analyzed	Limits	11/20/12	11/20/12	11/20/12	11/19/12	11/19/12
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	90	190	28	nd	nd
Surrogate recoveries:						
Trifluorotoluene		101%	125%	110%	94%	87%
Bromofluorobenzene		92%	110%	93%	90%	85%

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

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		MTH BLK	LCS	MTH BLK	LCS	HCE-2-S1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	nd	100%	nd	87%	1.0
Chromium (Cr)	2.0	nd	107%	nd	113%	nd
Cadmium (Cd)	1.0	nd	125%	nd	114%	nd
Arsenic (As)	2.0	nd	90%	nd	90%	nd
Mercury (Hg) (7471)	0.5	nd	76%	nd	81%	nd
Copper (Cu)	2.0	nd	112%	nd	100%	12
Nickel (Ni)	1.0	nd	116%	nd	101%	5.0
Zinc (Zn)	1.0	nd	115%	nd	83%	48

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%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-2-S2	HCE-5-S1	HCE-5-S2	HCE-5-S3	HCE-5-S4
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	nd	nd	nd	nd	nd
Chromium (Cr)	2.0	nd	nd	nd	nd	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd	nd
Copper (Cu)	2.0	5.4	13	4.5	3.1	3.9
Nickel (Ni)	1.0	4.1	9.7	nd	nd	5.9
Zinc (Zn)	1.0	23	36	20	14	17

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-7-S3	HCE-7-S4	HCE-7-S5	HCE-9-S3	HCE-9-S4
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	1.3	1.0	1.1	nd	nd
Chromium (Cr)	2.0	nd	nd	nd	nd	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd	nd
Copper (Cu)	2.0	15	8.0	12	3.9	3.7
Nickel (Ni)	1.0	38	5.2	23	3.9	7.0
Zinc (Zn)	1.0	60	32	46	17	16

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-9-S5	HCE-9-S5	HCE-9-S5	HCE-9-S5	HCE-13-S3
			Dupl	RPD	MS	
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	nd	nd		102%	nd
Chromium (Cr)	2.0	nd	nd		130%	nd
Cadmium (Cd)	1.0	nd	nd		119%	nd
Arsenic (As)	2.0	nd	nd		83%	nd
Mercury (Hg) (7471)	0.5	nd	nd		76%	nd
Copper (Cu)	2.0	3.5	3.4	3%		5.1
Nickel (Ni)	1.0	3.9	4.3	11%		3.5
Zinc (Zn)	1.0	13	16	16%		21

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-13-S4	HCE-13-S5	HCE-17-S1	HCE-17-S2
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	nd	nd	1.9	2.3
Chromium (Cr)	2.0	nd	nd	nd	3.3
Cadmium (Cd)	1.0	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd
Copper (Cu)	2.0	3.5	3.3	5.5	23
Nickel (Ni)	1.0	2.9	3.5	3.0	35
Zinc (Zn)	1.0	15	15	21	89

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: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals (7010/7471), mg/kg		HCE-21-S2	HCE-21-S3	MW-1-S1	MW-1-S2	MW-2-S2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	1.0	nd	nd	nd	nd
Chromium (Cr)	2.0	nd	nd	nd	nd	nd
Cadmium (Cd)	1.0	nd	nd	nd	nd	nd
Arsenic (As)	2.0	nd	nd	nd	nd	nd
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd	nd
Copper (Cu)	2.0	5.8	3.2	nd	2.8	12
Nickel (Ni)	1.0	6.5	nd	2.3	5.1	9.9
Zinc (Zn)	1.0	24	14	7.4	13	49

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
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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Metals (7010/7471), mg/kg		**MW-2-S3**	**MW-2-S4**	**MW-2-S5**	**MW-2-S5** Dupl	**MW-2-S5** RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Lead (Pb)	1.0	nd	nd	nd	nd	
Chromium (Cr)	2.0	nd	nd	nd	nd	
Cadmium (Cd)	1.0	nd	nd	nd	nd	
Arsenic (As)	2.0	nd	nd	nd	nd	
Mercury (Hg) (7471)	0.5	nd	nd	nd	nd	
Copper (Cu)	2.0	5.1	6.7	3.7	2.9	24%
Nickel (Ni)	1.0	3.4	15	7.9	6.1	26%
Zinc (Zn)	1.0	22	29	16	12	27%

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%

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results		MS
Metals (7010/7471), mg/kg		**MW-2-S5**
Matrix	Soil	Soil
Date extracted	Reporting	11/29/12
Date analyzed	Limits	11/29/12
Lead (Pb)	1.0	99%
Chromium (Cr)	2.0	87%
Cadmium (Cd)	1.0	118%
Arsenic (As)	2.0	78%
Mercury (Hg) (7471)	0.5	81%
Copper (Cu)	2.0	
Nickel (Ni)	1.0	
Zinc (Zn)	1.0	

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%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals TCLP (1311/7010), mg/L		MTH BLK	LCS	HCE-7-S1	HCE-7-S2	HCE-9-S1
Matrix	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract
Date extracted	Reporting	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Date analyzed	Limits	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Lead (Pb)	0.002	nd	87%	0.30	0.015	nd
Cadmium (Cd)	0.005	nd	114%	nd	nd	nd
Zinc (Zn)	0.01	nd	77%	0.45	0.10	0.02

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Metals TCLP (1311/7010), mg/L		HCE-9-S2	HCE-13-S1	HCE-13-S2	MW2-S1	MW2-S1 Dupl
Matrix	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract	Soil Extract
Date extracted	Reporting	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Date analyzed	Limits	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Lead (Pb)	0.002	nd	0.007	nd	nd	nd
Cadmium (Cd)	0.005	nd	nd	nd	nd	nd
Zinc (Zn)	0.01	nd	0.02	nd	nd	nd

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results		MS
Metals TCLP (1311/7010), mg/L		**MW2-S1**
Matrix	Soil Extract	Soil Extract
Date extracted	Reporting	11/30/12
Date analyzed	Limits	11/30/12
Lead (Pb)	0.002	124%
Cadmium (Cd)	0.005	124%
Zinc (Zn)	0.01	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- Matrix interference
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 30%

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Moisture, SM2540B	HCE-2-S1	HCE-2-S2	HCE-2-S3	HCE-2-S5	HCE-2-S7
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	9.8%	9.1%	9.7%	9.8%	11%

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Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Moisture, SM2540B	HCE-2-S8	HCE-5-S1	HCE-5-S2	HCE-5-S3	HCE-5-S4
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	12%	10%	9.3%	9.7%	10%

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AAL Job Number:	A21119-2
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Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Moisture, SM2540B	HCE-5-S7	HCE-7-S2	HCE-7-S3	HCE-7-S4	HCE-7-S5
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	9.8%	12%	13%	11%	10%

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AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Moisture, SM2540B	HCE-7-S6	HCE-7-S8	HCE-7-S9	HCE-7-S10	HCE-9-S3
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	9.6%	11%	13%	13%	9.3%

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Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Moisture, SM2540B	HCE-9-S4	HCE-9-S5	HCE-13-S3	HCE-13-S4	HCE-13-S5
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	10%	12%	9.3%	9.6%	10%

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Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Moisture, SM2540B	HCE-13-S8	HCE-13-S9	HCE-13-S10	HCE-17-S1
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	12%	11%	12%	8.6%

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Client: Hart Crowser, Inc.
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Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Moisture, SM2540B	HCE-17-S2	HCE-17-S3	HCE-17-S4	HCE-17-S8
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	9.5%	10%	9.9%	12%

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AAL Job Number:	A21119-2
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Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

Analytical Results

Moisture, SM2540B	HCE-21-S2	HCE-21-S3	HCE-21-S4	HCE-21-S5
Matrix	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	9.2%	9.1%	9.2%	9.1%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
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Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Moisture, SM2540B	HCE-21-S7	MW-1-S1	MW-1-S2	MW-1-S8	MW-1-S10
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	12%	8.9%	9.1%	9.8%	9.9%

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AAL Job Number: A21119-2
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic, Angie Goodwin
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/19/12

Analytical Results

Moisture, SM2540B	MW-2-S2	MW-2-S3	MW-2-S4	MW-2-S5	MW-2-S6
Matrix	Soil	Soil	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12	11/29/12	11/29/12
Moisture, %	10%	11%	11%	11%	12%

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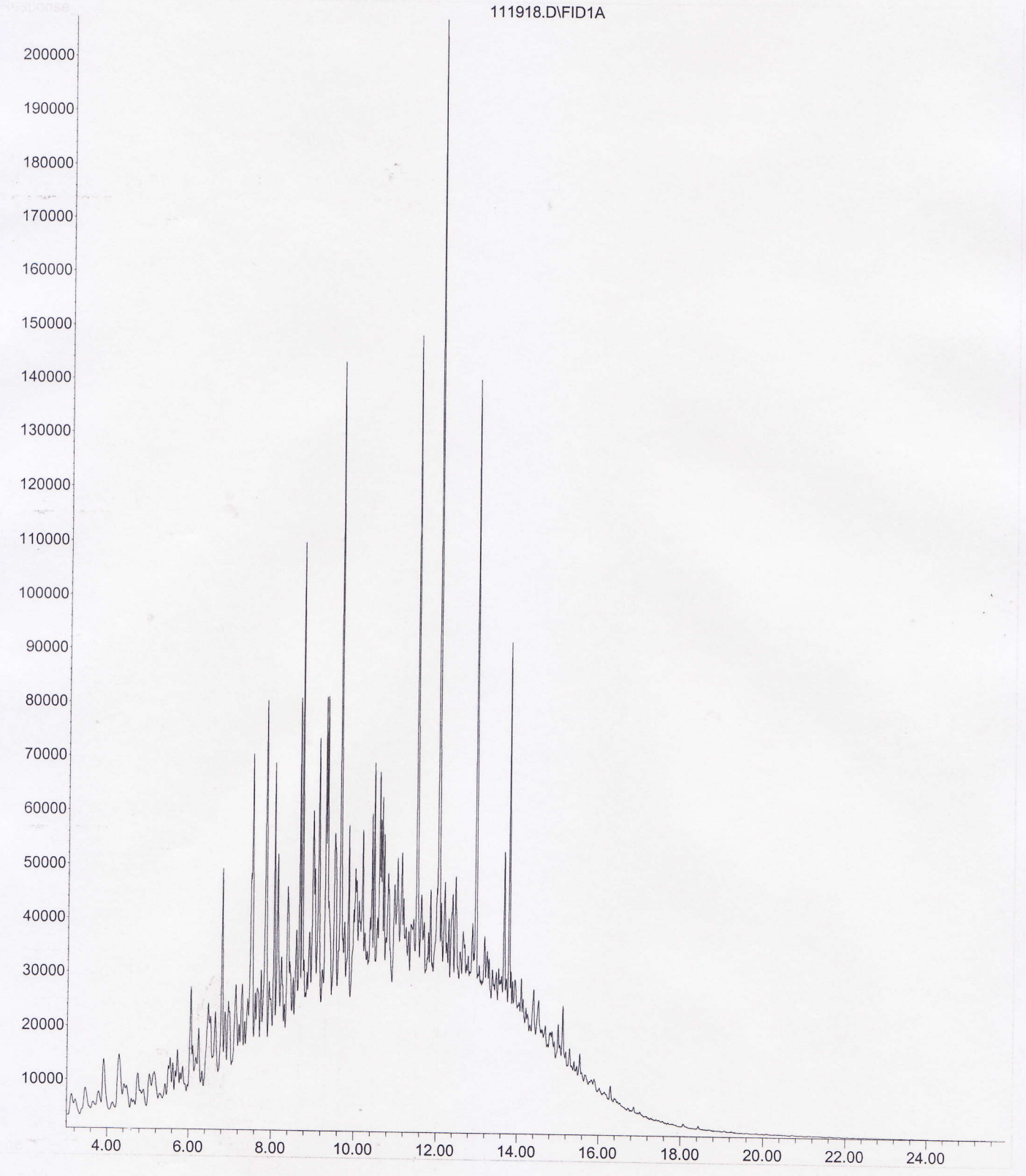
AAL Job Number:	A21119-2
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic, Angie Goodwin
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/19/12

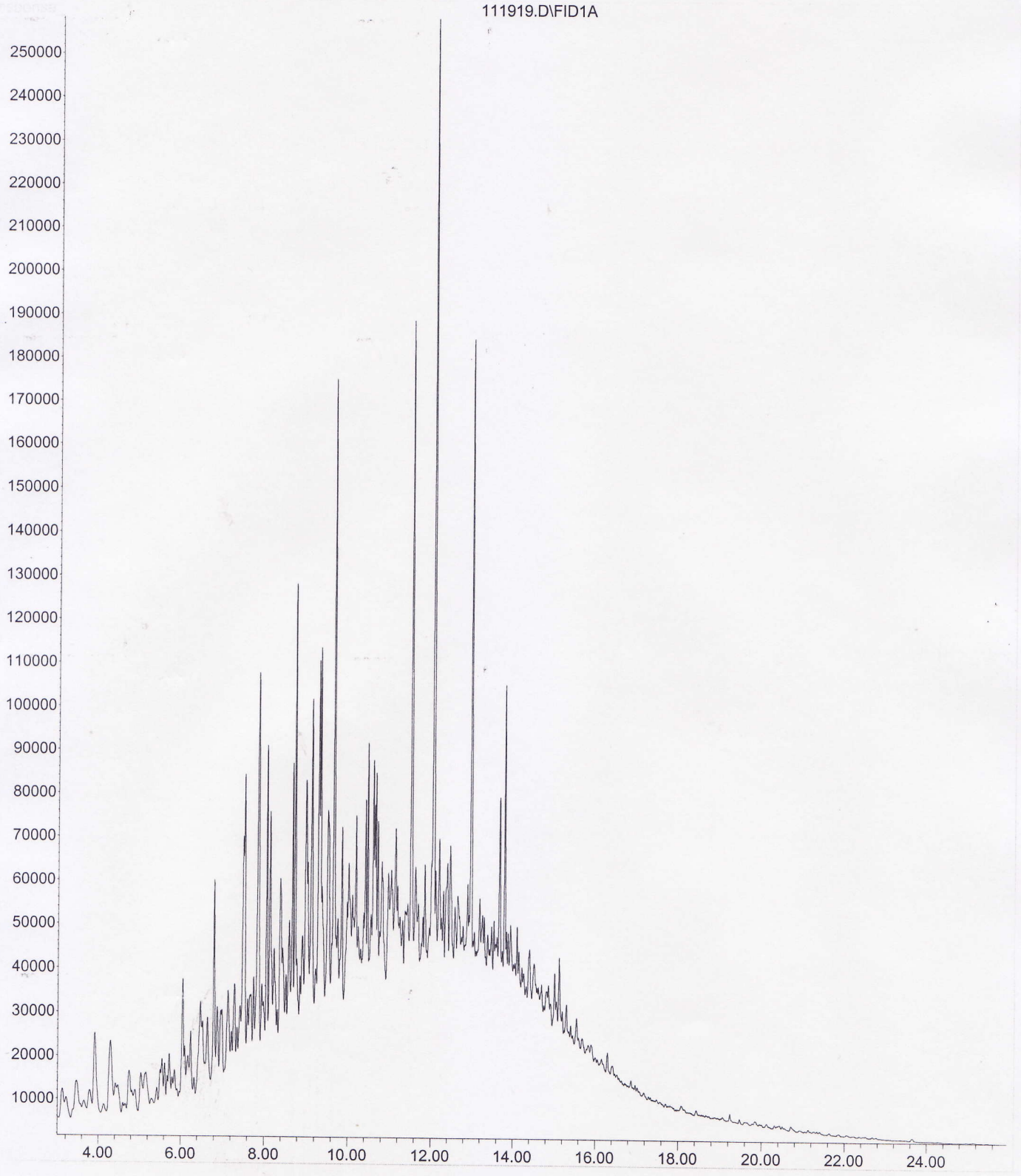
Analytical Results

Moisture, SM2540B	MW-2-S7	MW-2-S8	MW-2-S10
Matrix	Soil	Soil	Soil
Date analyzed	11/29/12	11/29/12	11/29/12
Moisture, %	13%	13%	13%

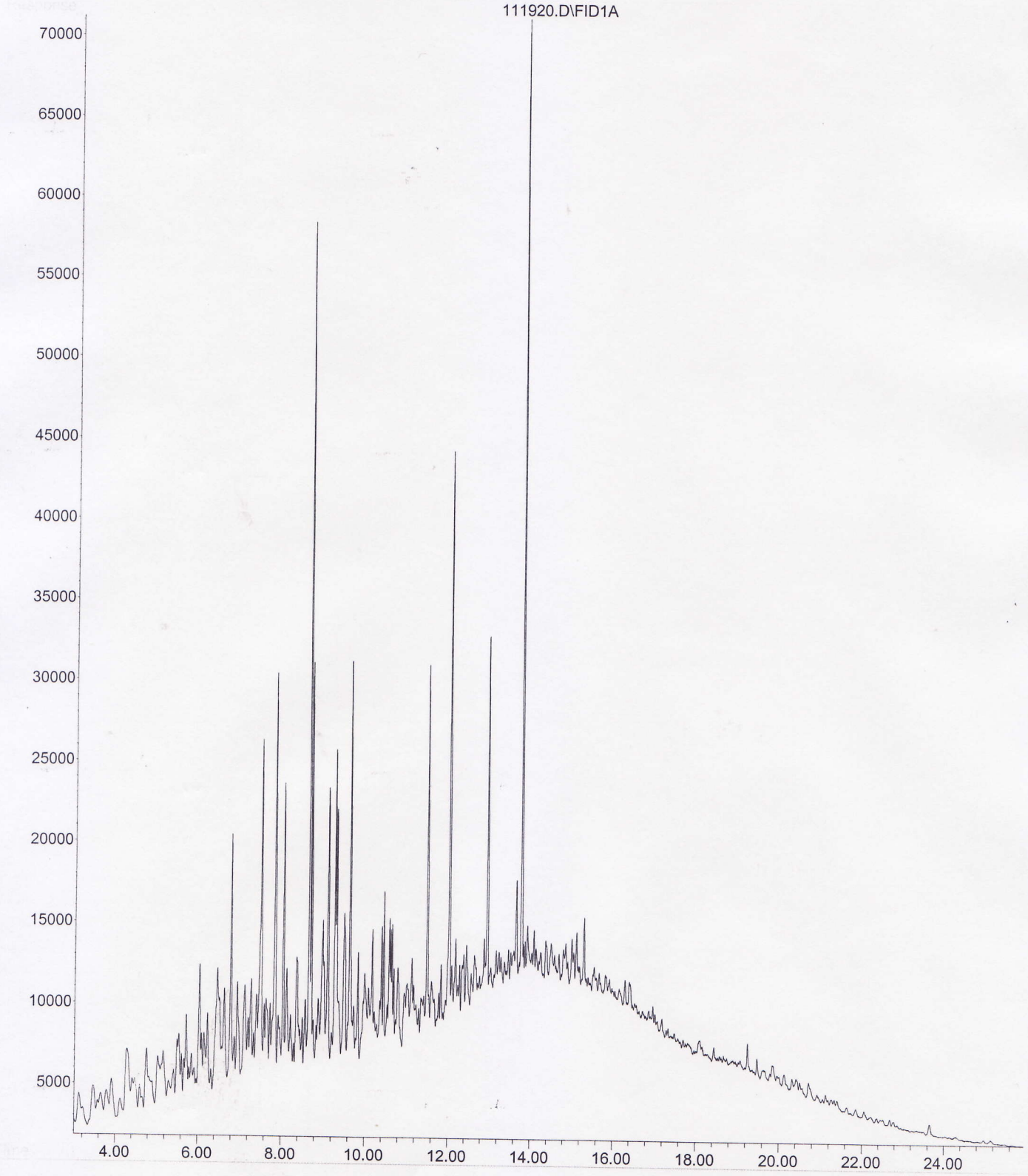
File : C:\HPCHEM\1\DATA\111912\111918.D
Operator :
Acquired : 20 Nov 2012 1:00 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-7-s2
Misc Info :
Vial Number: 17



File : C:\HPCHEM\1\DATA\111912\111919.D
Operator :
Acquired : 20 Nov 2012 1:31 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-7-s3
Misc Info :
Vial Number: 18



File : C:\HPCHEM\1\DATA\111912\111920.D
Operator :
Acquired : 20 Nov 2012 2:03 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-7-s4
Misc Info :
Vial Number: 19



File : C:\HPCHEM\1\DATA\111912\111921.D
Operator :
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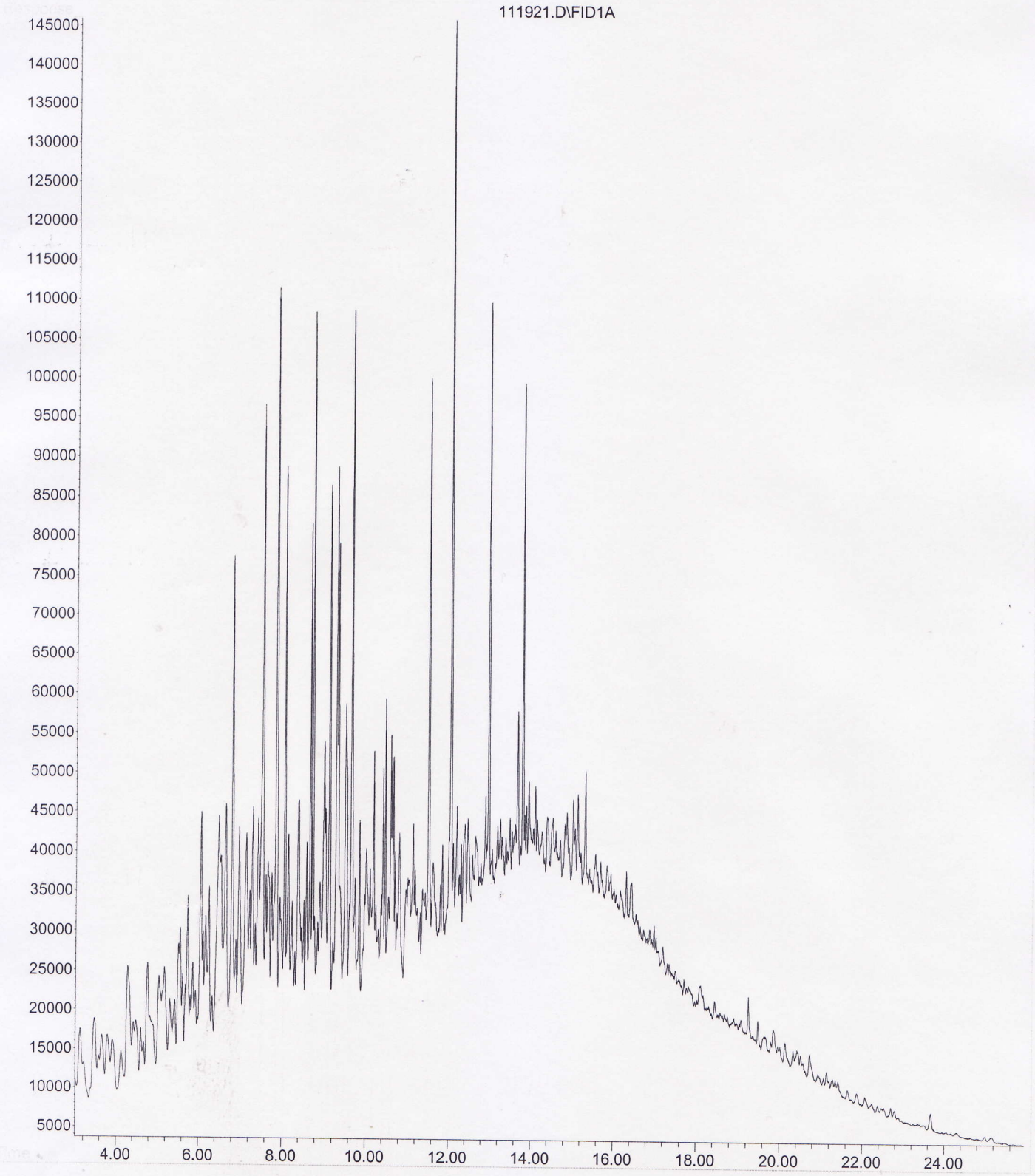
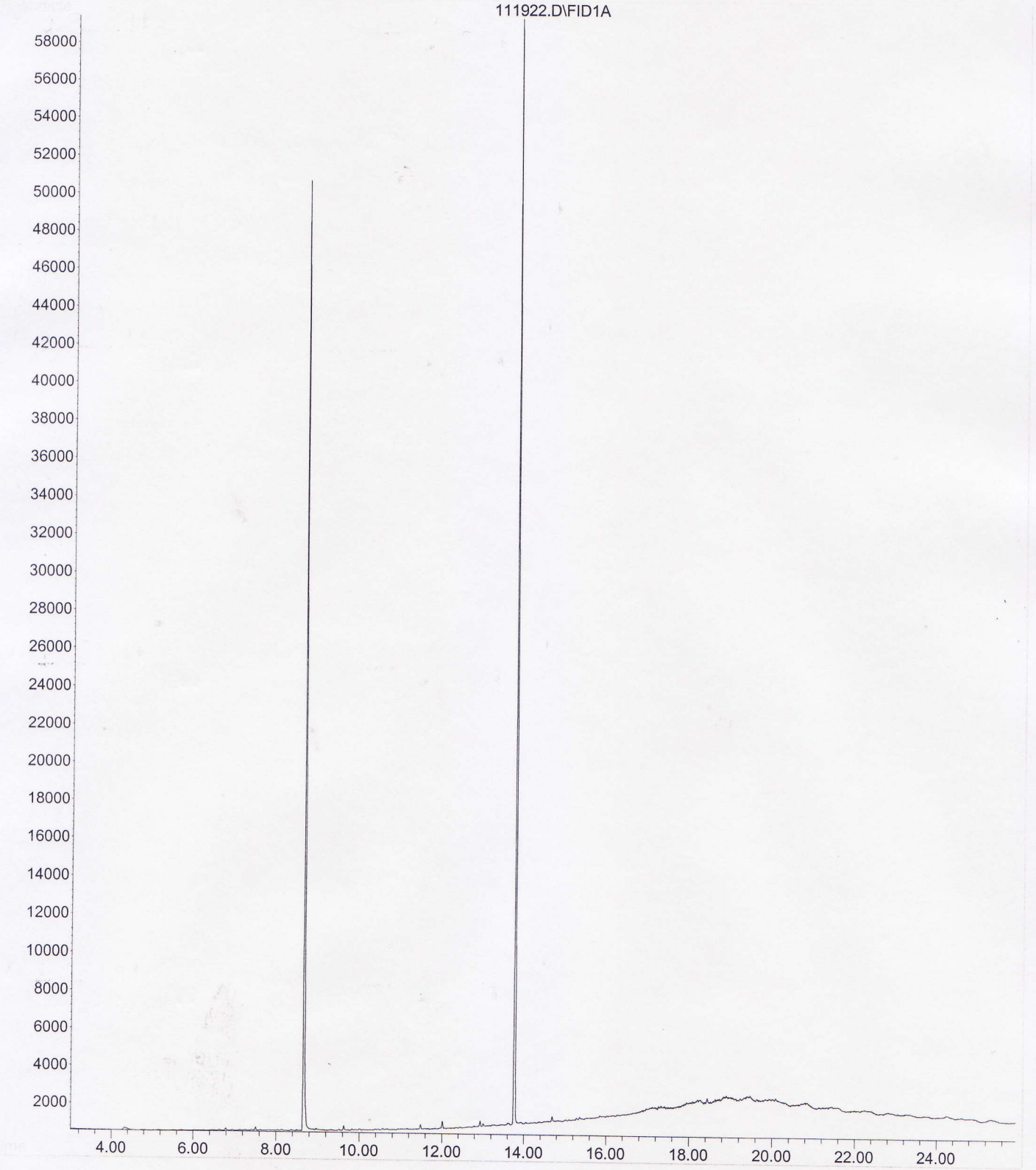
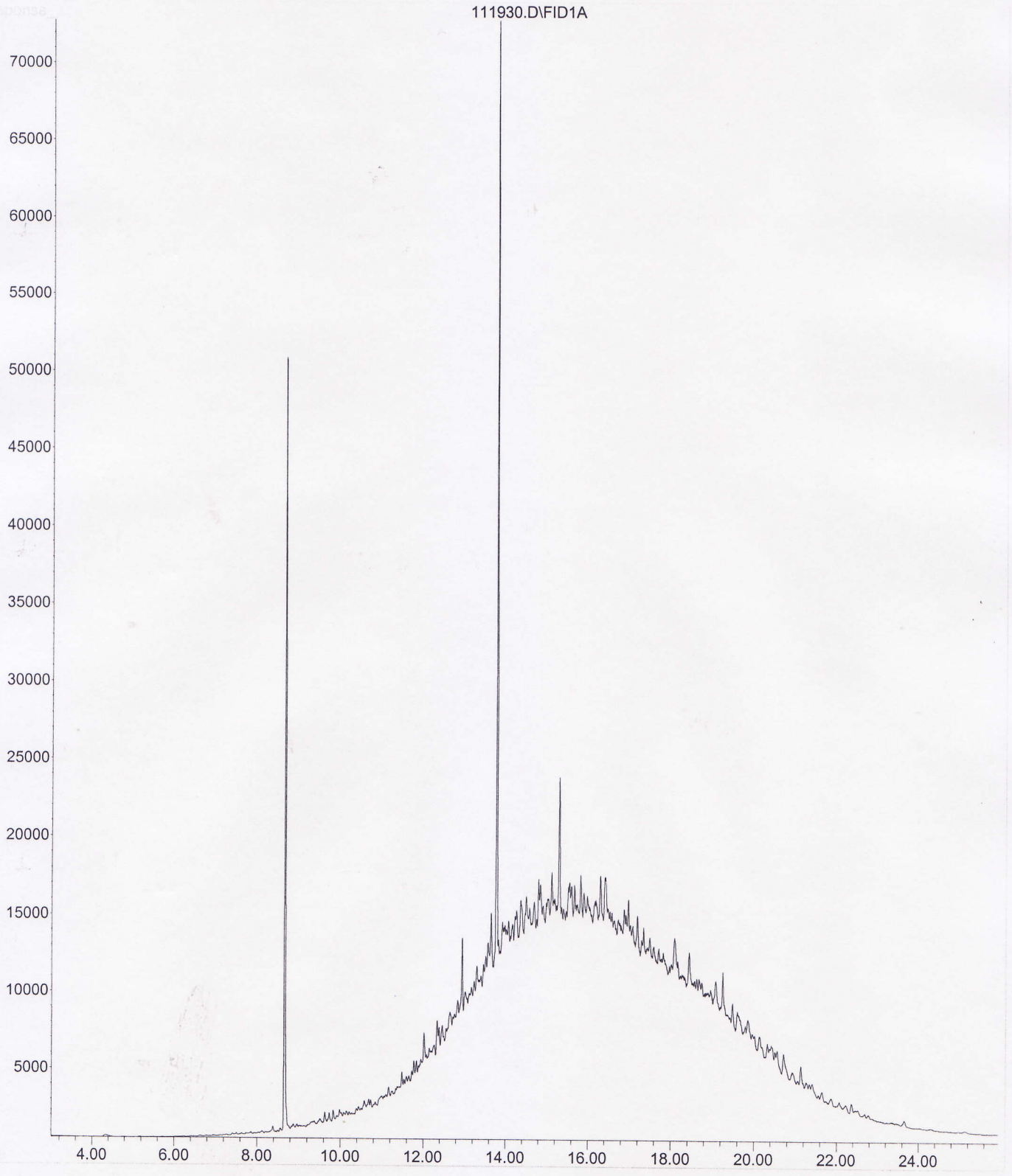
Instrument : GC/MS Ins
Sample Name: hce-7-s5
Misc Info :
Vial Number: 20



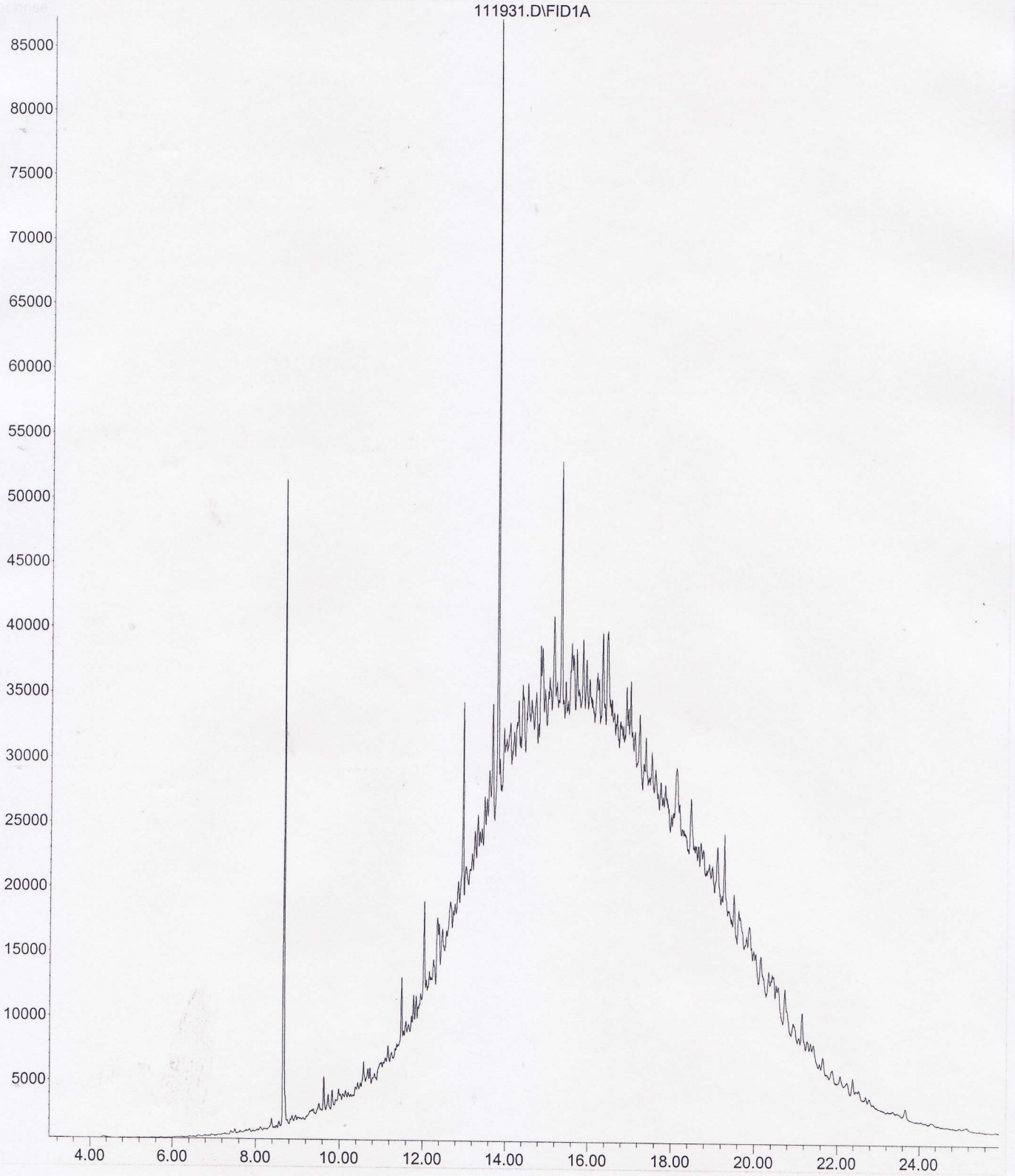
File : C:\HPCHEM\1\DATA\111912\111922.D
Operator :
Acquired : 20 Nov 2012 3:05 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-7-s6
Misc Info :
Vial Number: 21



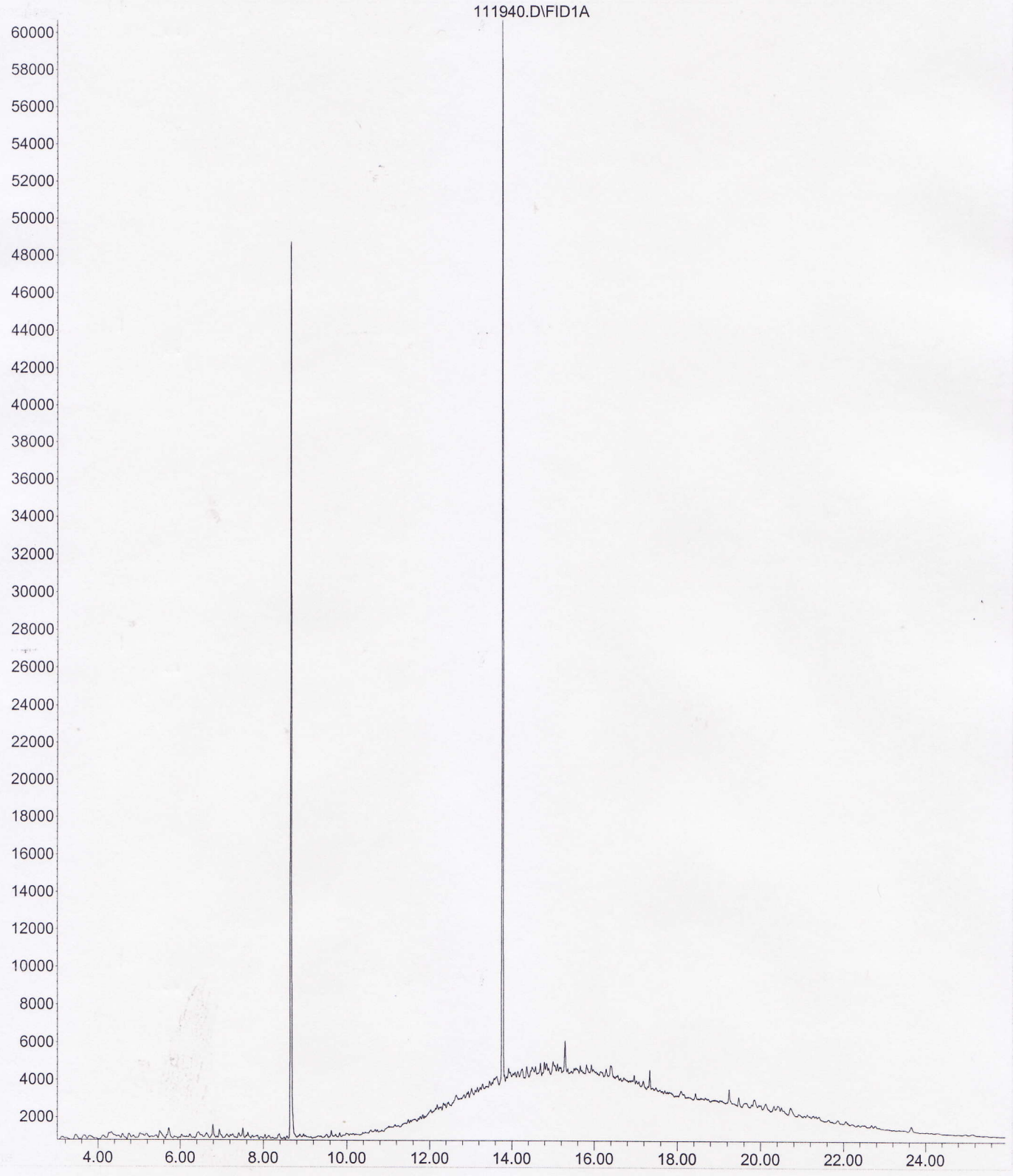
File : C:\HPCHEM\1\DATA\111912\111930.D
Operator :
Acquired : 20 Nov 2012 7:15 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-17-s2
Misc Info :
Vial Number: 29



File : C:\HPCHEM\1\DATA\111912\111931.D
Operator :
Acquired : 20 Nov 2012 7:47 am using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: hce-17-s3
Misc Info :
Vial Number: 30

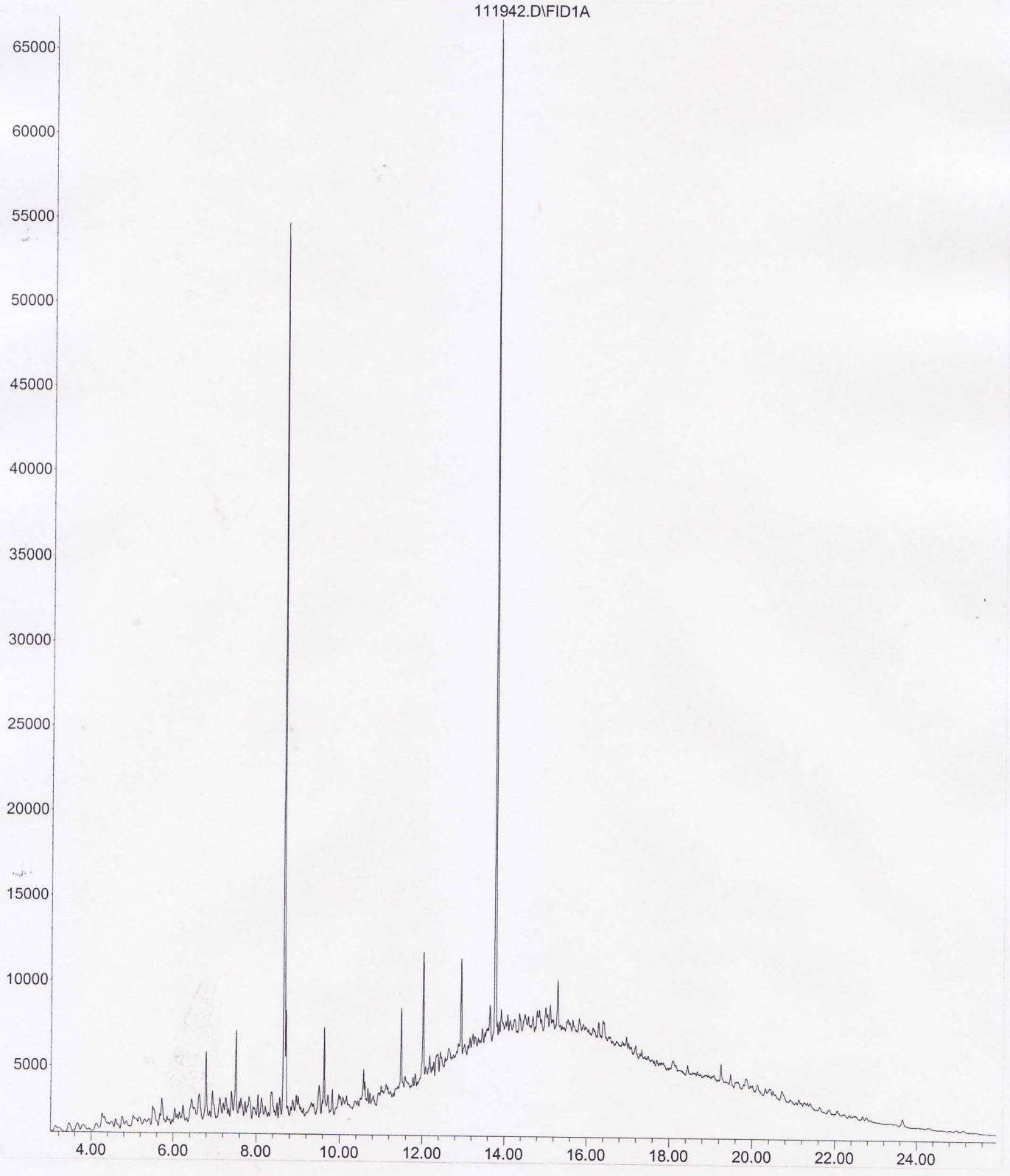


File : C:\HPCHEM\1\DATA\111912\111940.D
Operator :
Acquired : 20 Nov 2012 12:28 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw2-s2
Misc Info :
Vial Number: 39

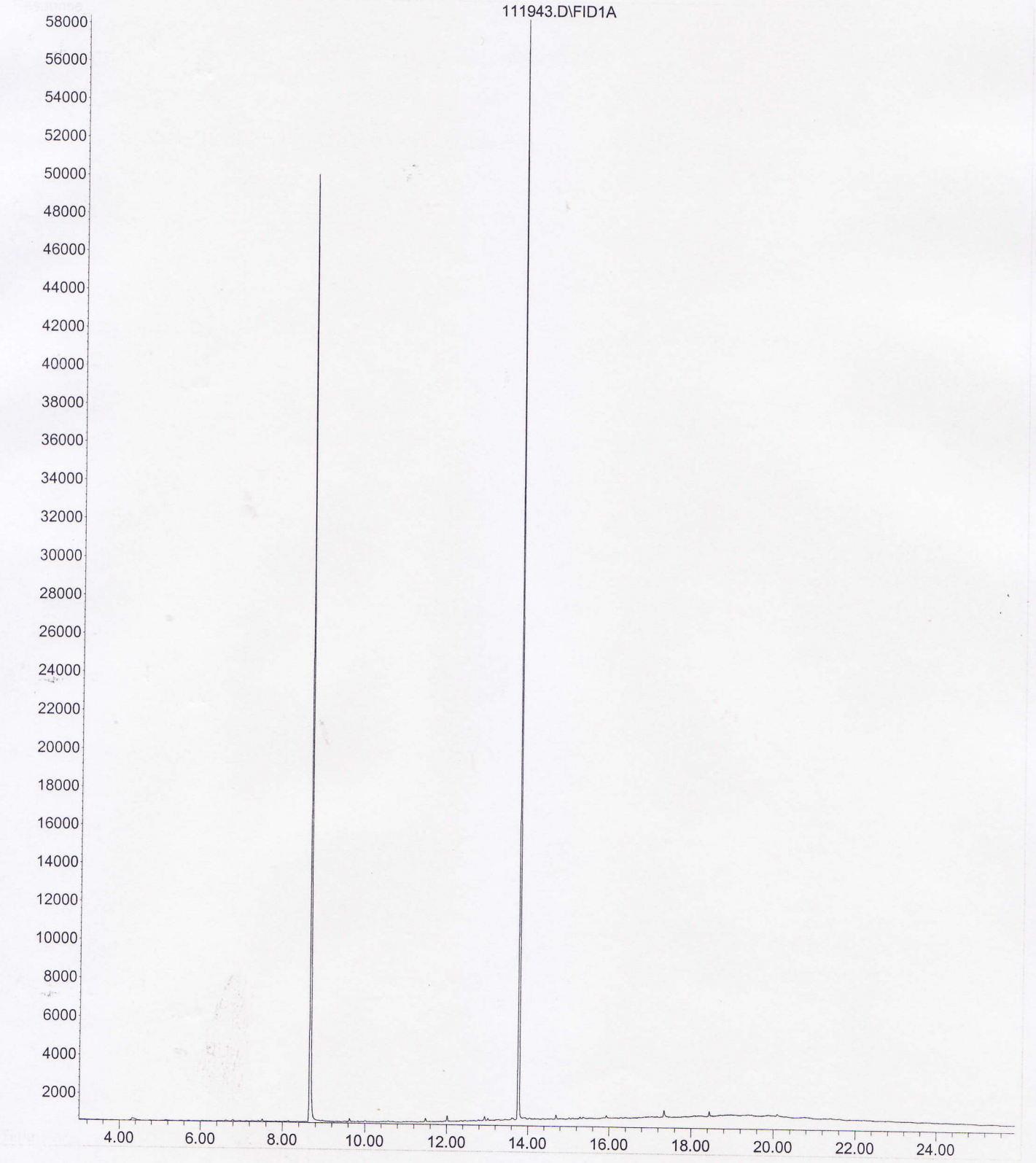


File : C:\HPCHEM\1\DATA\111912\111941.D
Operator :
Acquired : 20 Nov 2012 12:59 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw2-s3
Misc Info :
Vial Number: 40

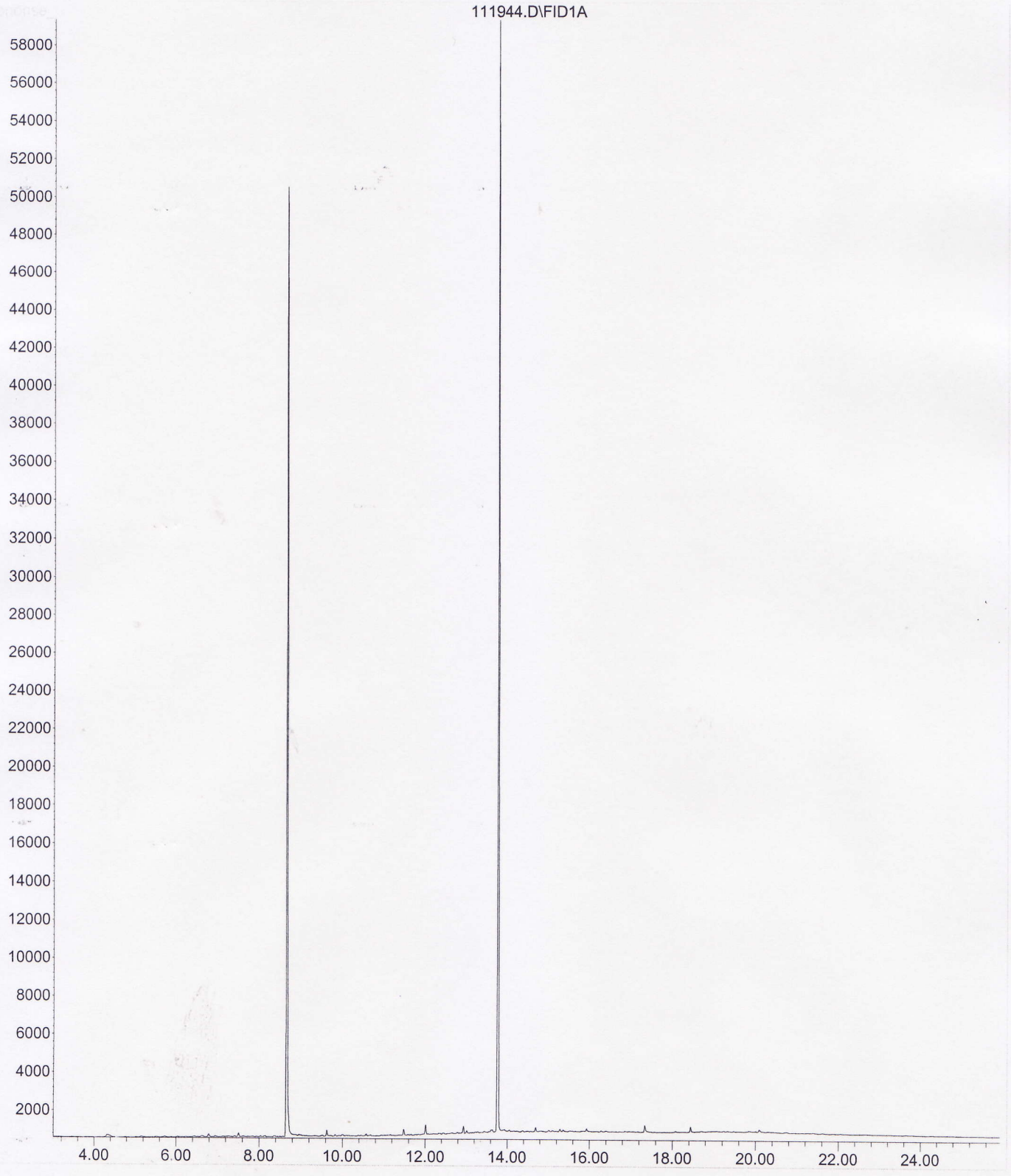
File : C:\HPCHEM\1\DATA\111912\111942.D
Operator :
Acquired : 20 Nov 2012 1:30 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw2-s4
Misc Info :
Vial Number: 41



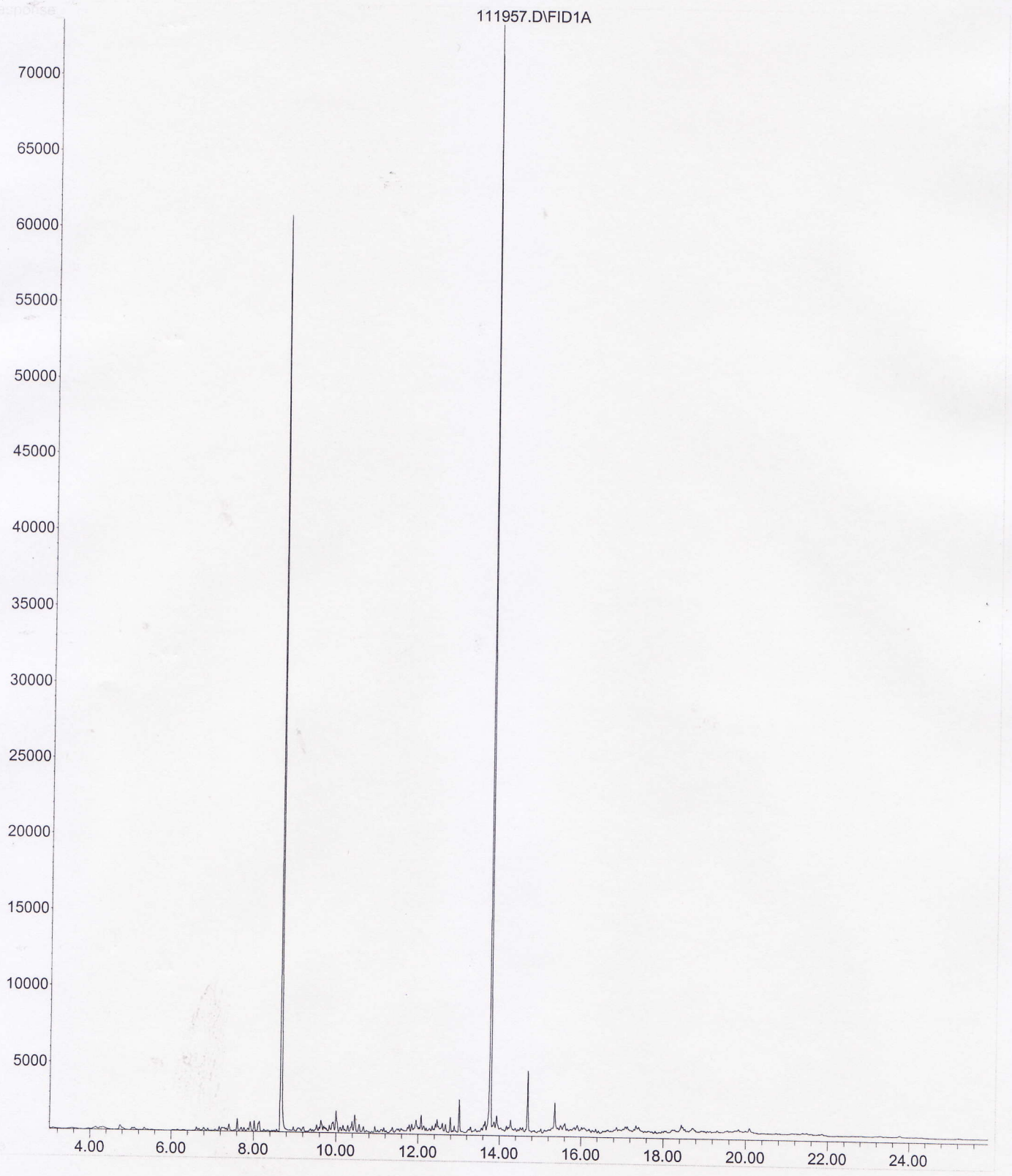
File : C:\HPCHEM\1\DATA\111912\111943.D
Operator :
Acquired : 20 Nov 2012 2:02 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw2-s5
Misc Info :
Vial Number: 42



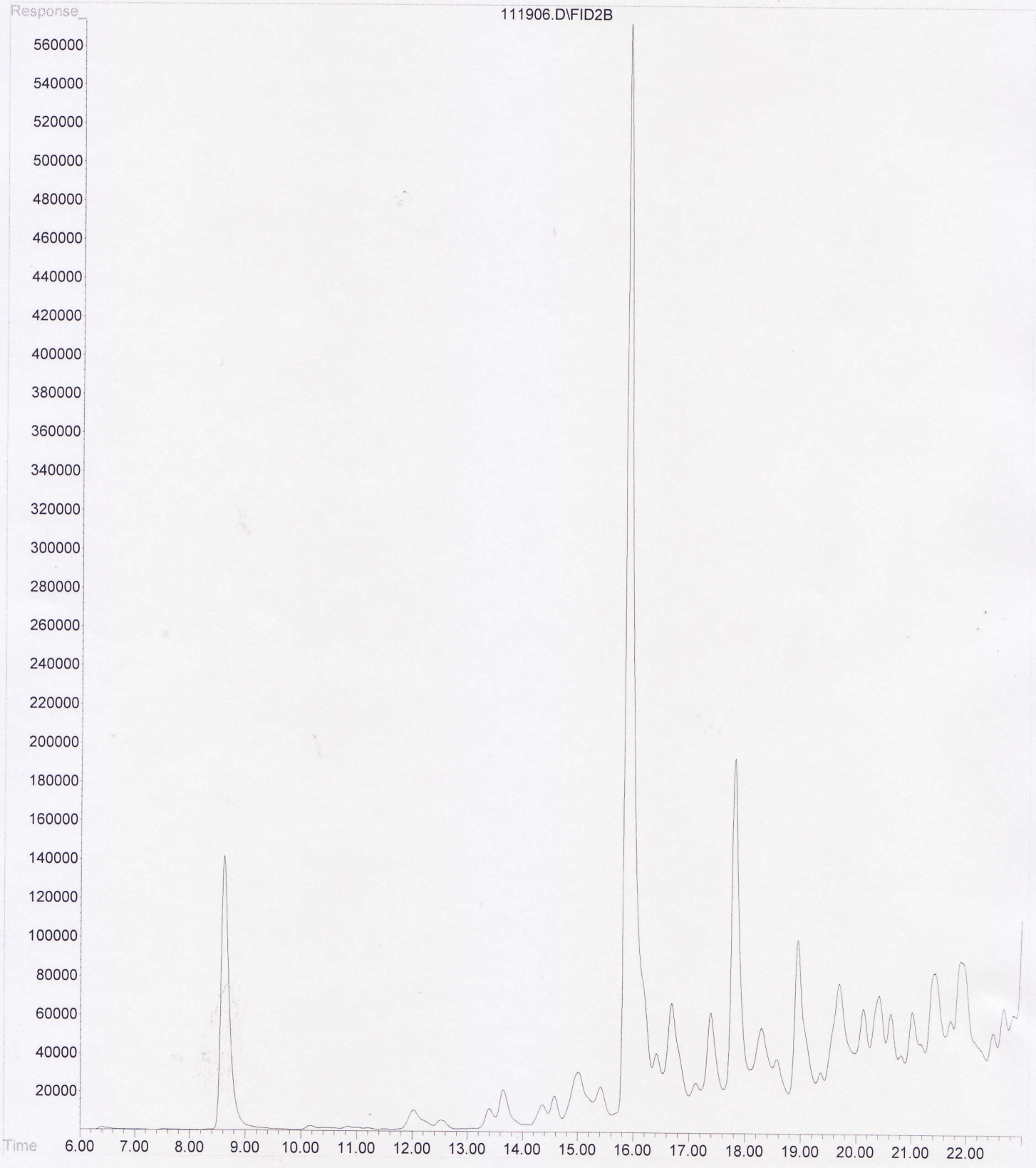
File : C:\HPCHEM\1\DATA\111912\111944.D
Operator :
Acquired : 20 Nov 2012 2:33 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw2-s6
Misc Info :
Vial Number: 43



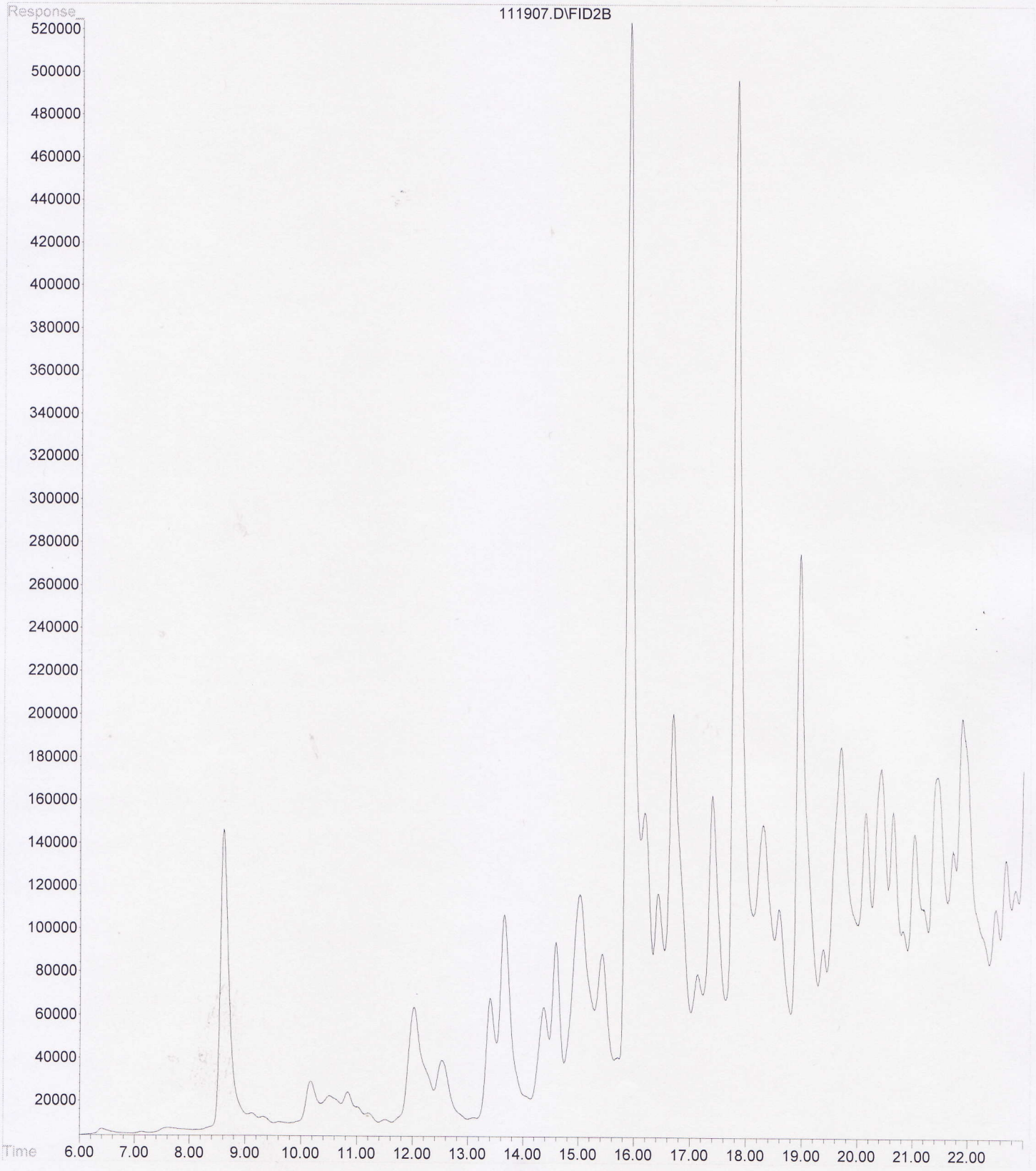
File : C:\HPCHEM\1\DATA\111912\111957.D
Operator :
Acquired : 20 Nov 2012 9:20 pm using AcqMethod DX.M
Instrument : GC/MS Ins
Sample Name: mw-2-s8 soil rerun
Misc Info :
Vial Number: 55



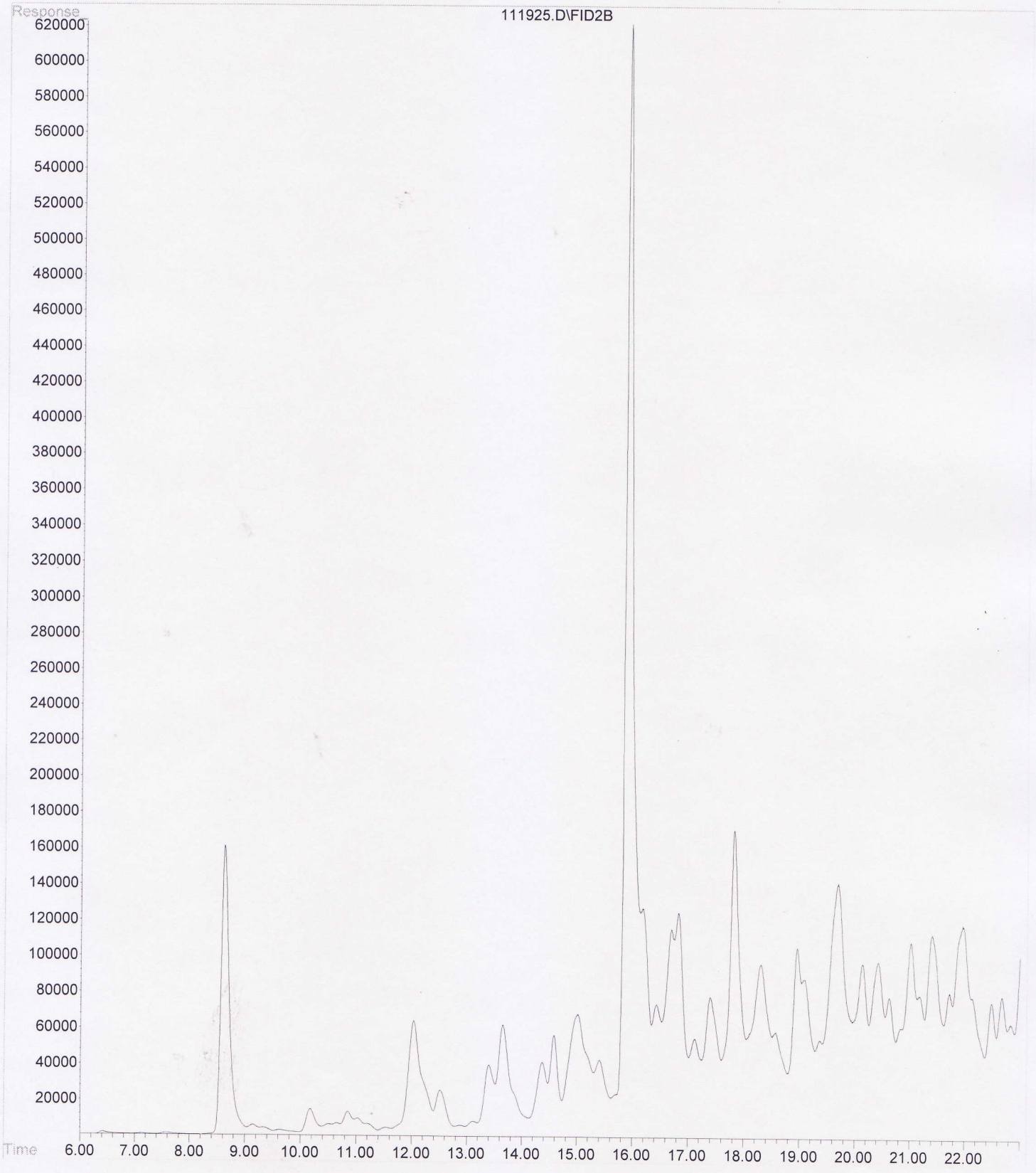
File : C:\HPCHEM\1\DATA\111912\111906.D
Operator :
Acquired : 19 Nov 2012 8:44 pm using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: hce-7-s2 soil 100ul
Misc Info :
Vial Number: 6



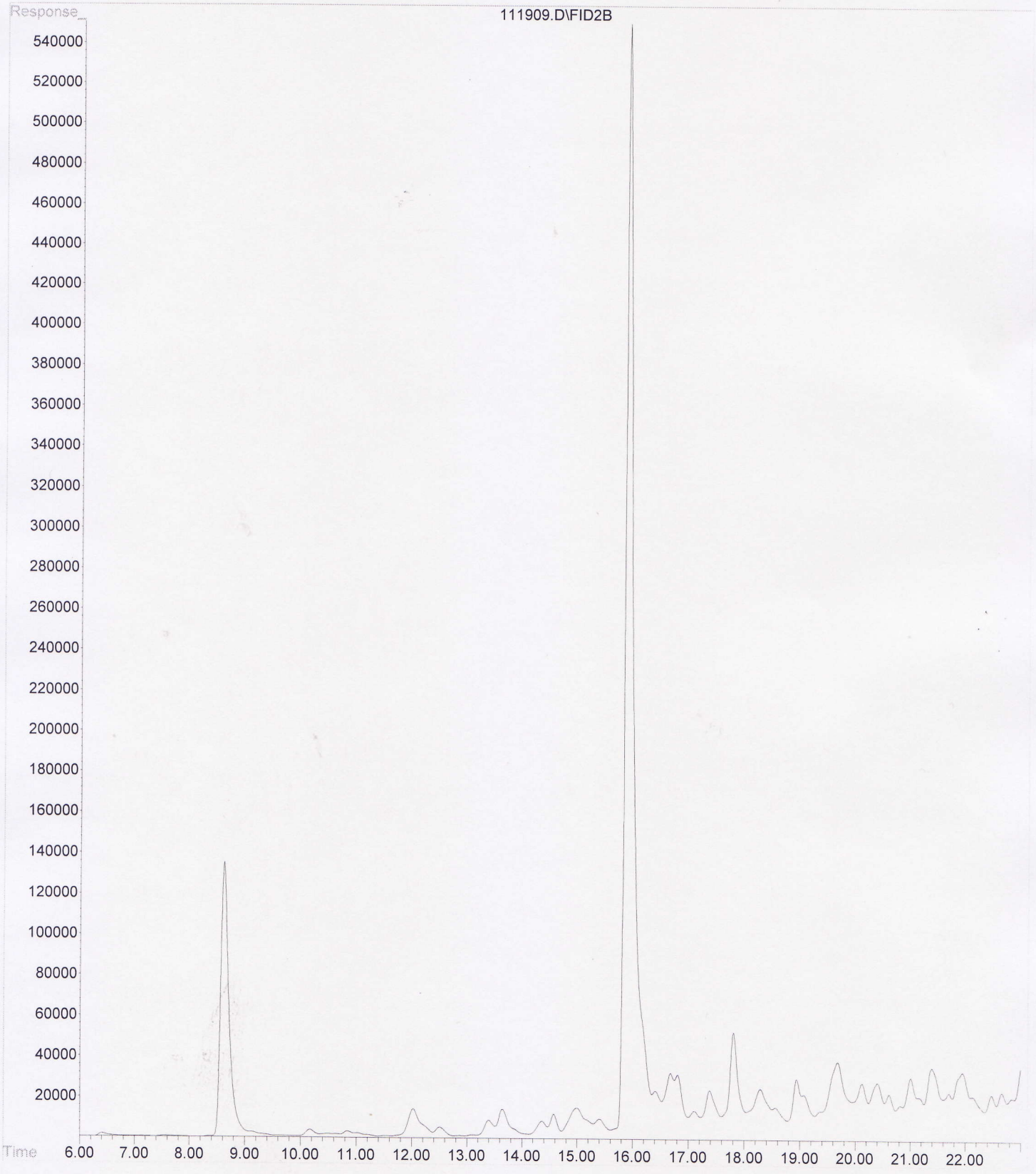
File : C:\HPCHEM\1\DATA\111912\111907.D
Operator :
Acquired : 19 Nov 2012 9:10 pm using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: hce-7-s3 soil 100ul
Misc Info :
Vial Number: 7



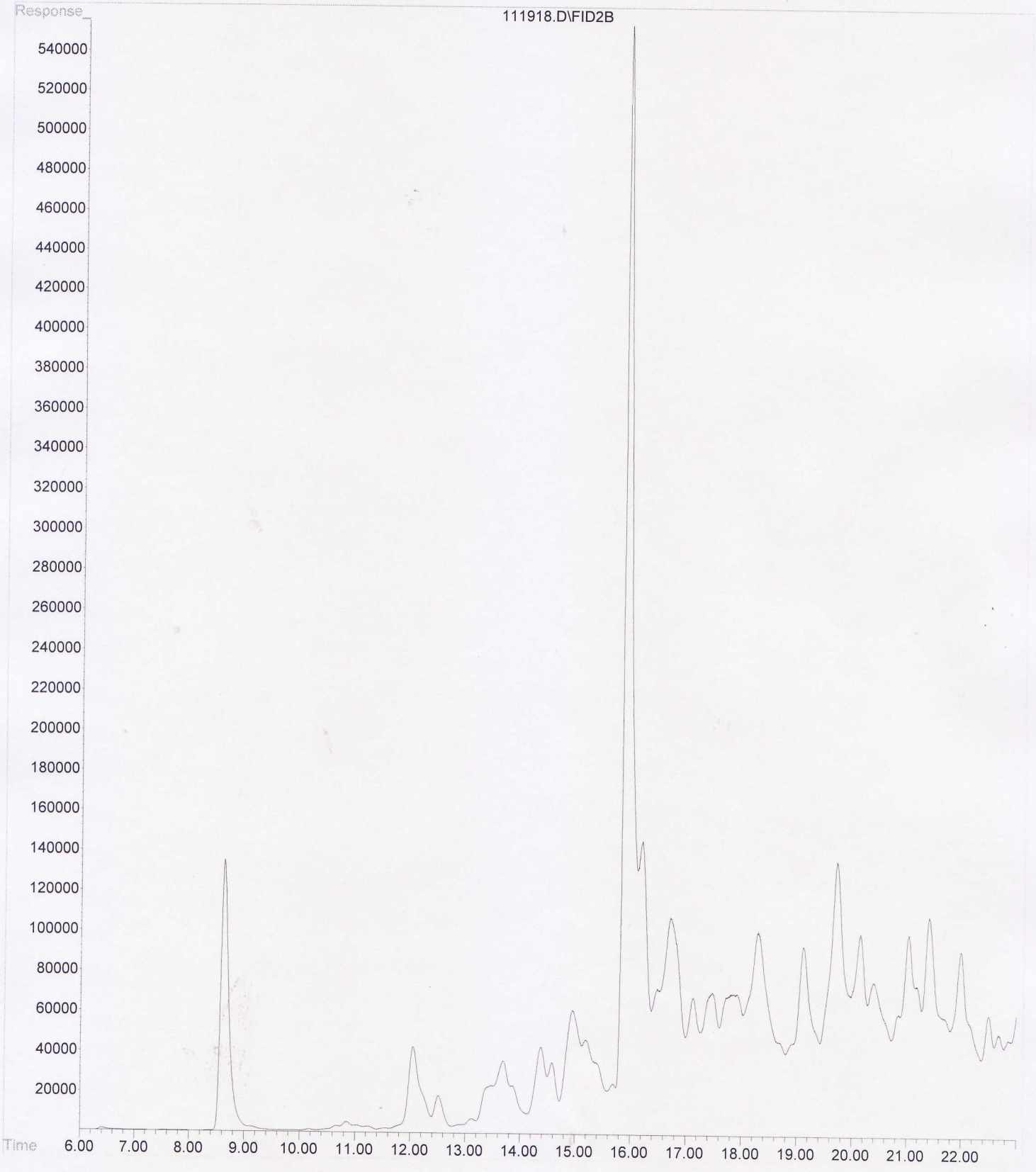
File : C:\HPCHEM\1\DATA\111912\111925.D
Operator :
Acquired : 20 Nov 2012 2:20 pm using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: hce-7-s4 soil 100ul rerun
Misc Info :
Vial Number: 1



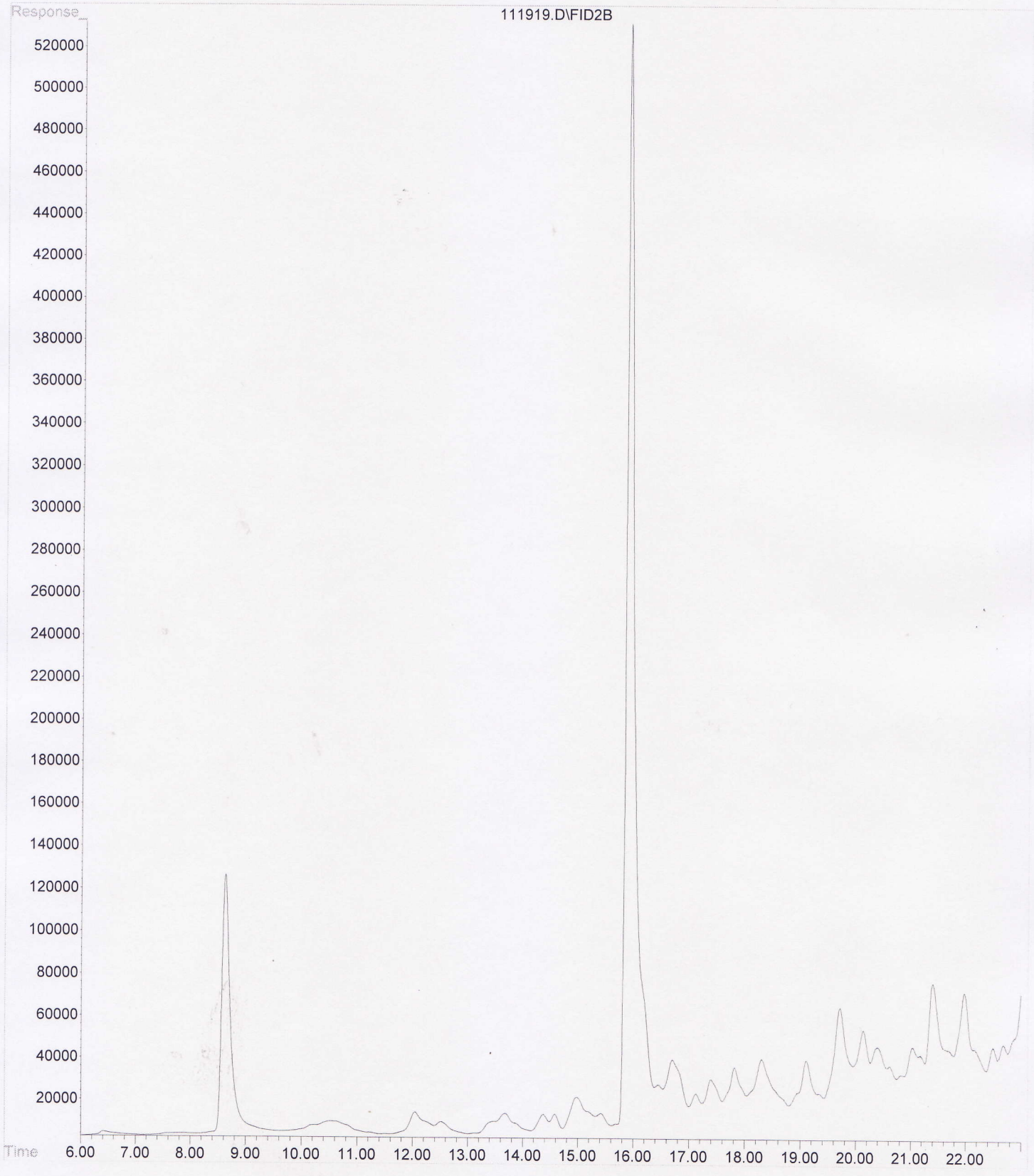
File : C:\HPCHEM\1\DATA\111912\111909.D
Operator :
Acquired : 19 Nov 2012 10:00 pm using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: hce-7-s5 soil 100ul
Misc Info :
Vial Number: 9



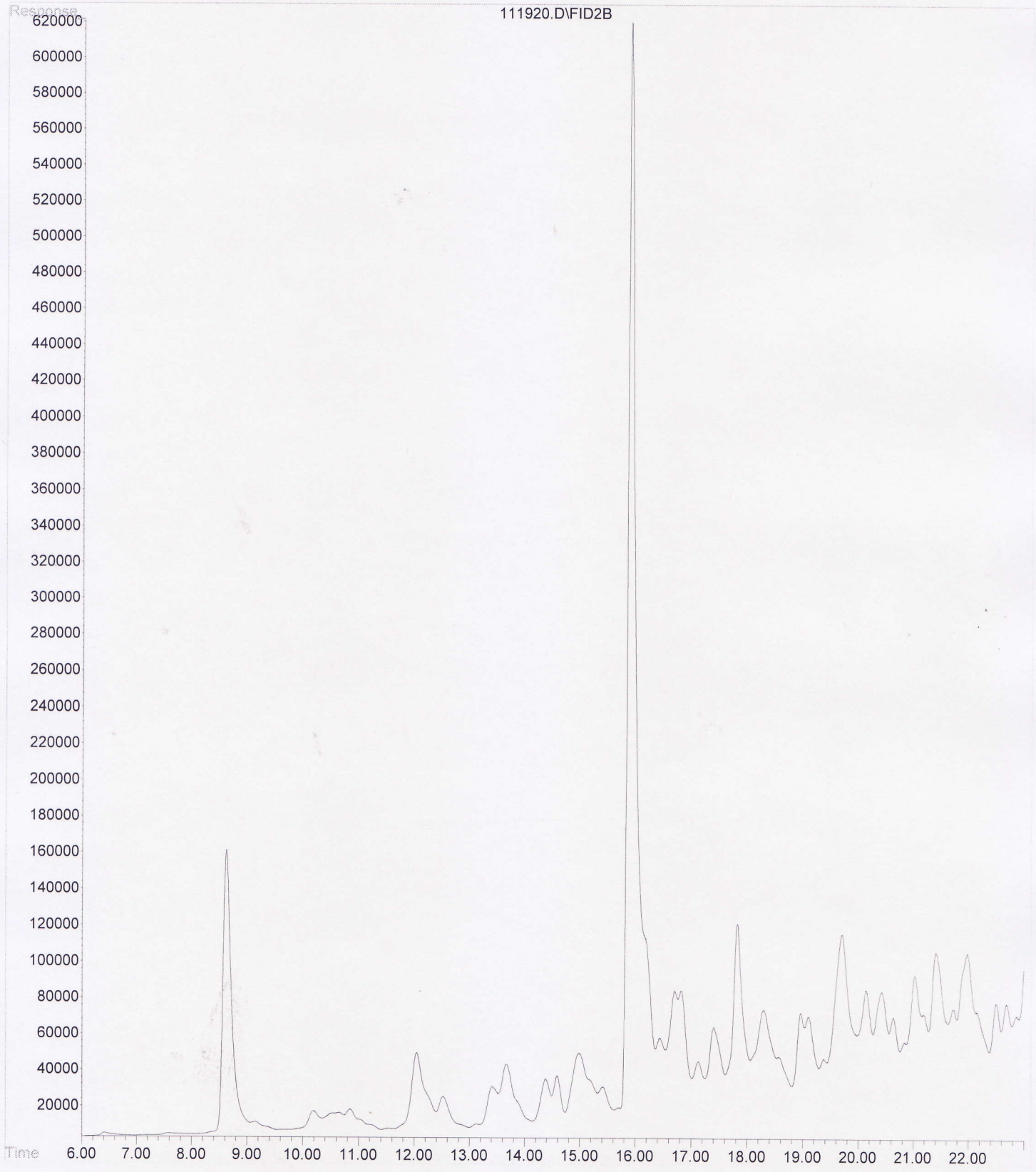
File : C:\HPCHEM\1\DATA\111912\111918.D
Operator :
Acquired : 20 Nov 2012 11:06 am using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: mw2-s2 soil 100ul
Misc Info :
Vial Number: 18



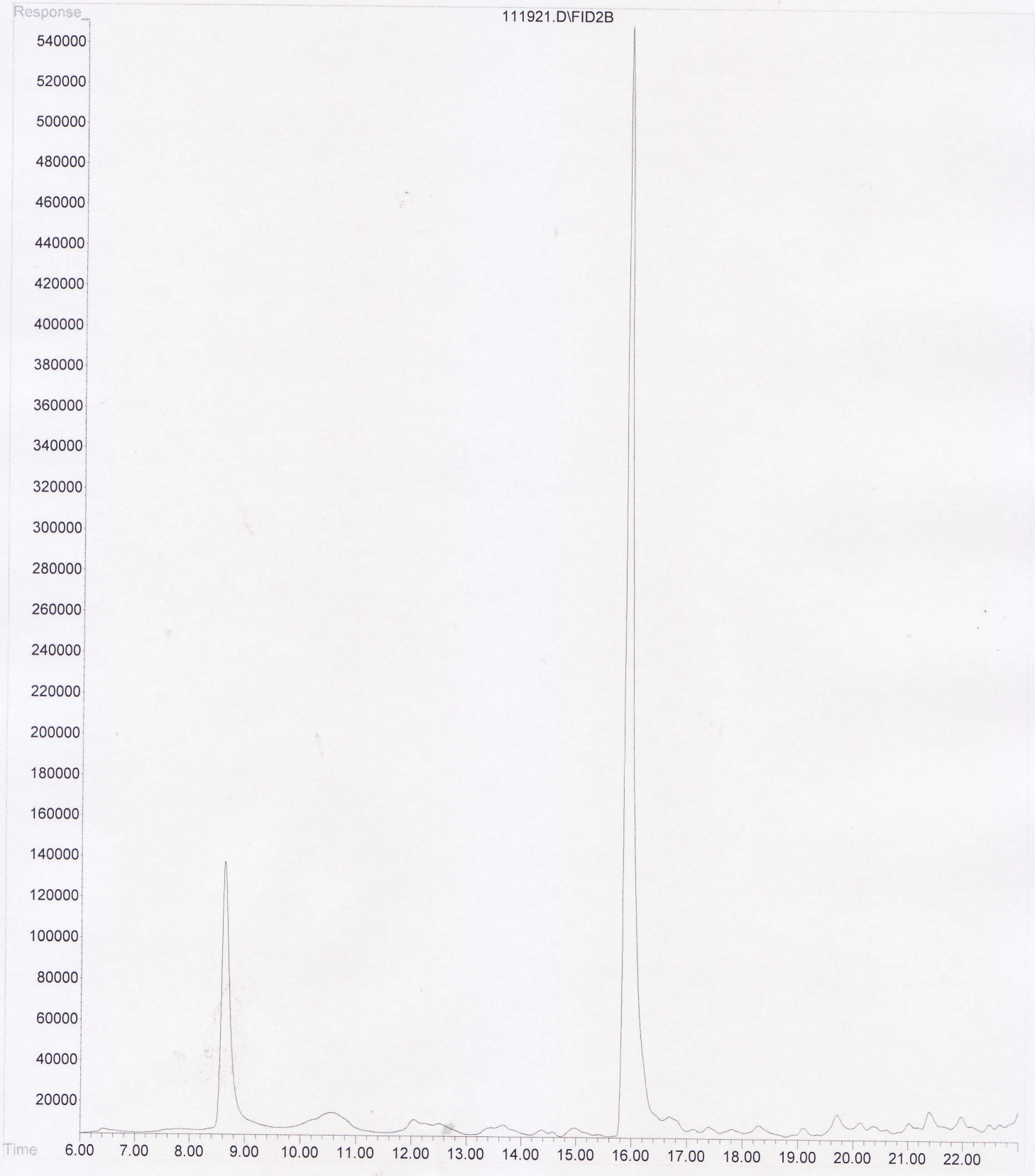
File : C:\HPCHEM\1\DATA\111912\111919.D
Operator :
Acquired : 20 Nov 2012 11:31 am using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: mw2-s3 soil 100ul
Misc Info :
Vial Number: 19



File : C:\HPCHEM\1\DATA\111912\111920.D
Operator :
Acquired : 20 Nov 2012 11:56 am using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: mw2-s4 soil 100ul
Misc Info :
Vial Number: 20



File : C:\HPCHEM\1\DATA\111912\111921.D
Operator :
Acquired : 20 Nov 2012 12:22 pm using AcqMethod BTGX.M
Instrument : GC-GAS-BT
Sample Name: mw2-s5 soil 100ul
Misc Info :
Vial Number: 21



ADVANCED ANALYTICAL

Environmental Testing Laboratory

December 06, 2012

Julie Wukelic
Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, WA 98109

Dear Ms. Wukelic:

Please find enclosed the analytical data report for the *Former BMW, 17859-02* ***(A21129-4)*** Project.

Samples were received on *November 29, 2012*. 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) 497-0110.

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

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052
ph 425.497.0110 fax 425.497.8089
E-mail: aachemlab@yahoo.com

Sample Custody Record

Samples Shipped to: AAL

1081

A21129-4

HARTCROWSER

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

JOB 17859-02 LAB NUMBER

PROJECT NAME Former BMW

HART CROWSER CONTACT Julie Wukelic & Angie Goodwin

SAMPLED BY: KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: NWTPH-Dx	NWTPH-Gx	VOCs	Total Metals*	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-1	Various bottles	11/28/12	1258	H_2O	X	X	X	X	7	
	MW-2		↓	1400	↓	X	X	X	X	7	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Angie Goodwin	11/29/12	SIGNATURE: V. Ivanov	11/29/12
PRINT NAME: Angie Goodwin	TIME 1900	PRINT NAME: V. Ivanov	TIME 1100
COMPANY: AAL		COMPANY: AAL	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Total Metals (unfiltered sample) Pb, Cr, Cd, As, Hg, Cu, Ni, & Zn

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

TOTAL NUMBER OF CONTAINERS: 14

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:	A21129-4
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/29/12

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

AAL Job Number:	A21129-4
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/29/12

Analytical Results

8260B, µg/L		MTH BLK	LCS	MW-1	MW-2	MW-2 MS	MW-2 MSD	MW-2 RPD
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
MTBE	5.0	nd		nd	nd			
Chloromethane	1.0	nd		nd	nd			
Vinyl chloride(*)	0.2	nd		nd	nd			
Bromomethane	1.0	nd		nd	nd			
Chloroethane	1.0	nd		nd	nd			
Trichlorofluoromethane	1.0	nd		nd	nd			
1,1-Dichloroethene	1.0	nd		nd	nd			
Methylene chloride	1.0	nd		nd	nd			
trans-1,2-Dichloroethene	1.0	nd		nd	nd			
1,1-Dichloroethane	1.0	nd		nd	nd			
2,2-Dichloropropane	1.0	nd		nd	nd			
cis-1,2-Dichloroethene	1.0	nd		nd	nd			
Chloroform	1.0	nd		nd	nd			
1,1,1-Trichloroethane	1.0	nd		nd	nd			
Carbontetrachloride	1.0	nd		nd	nd			
1,1-Dichloropropene	1.0	nd		nd	nd			
Benzene	1.0	nd	74%	nd	nd	78%	94%	19%
1,2-Dichloroethane(EDC)	1.0	nd		nd	nd			
Trichloroethene	1.0	nd	75%	nd	nd	78%	94%	19%
1,2-Dichloropropane	1.0	nd		nd	nd			
Dibromomethane	1.0	nd		nd	nd			
Bromodichloromethane	1.0	nd		nd	nd			
cis-1,3-Dichloropropene	1.0	nd		nd	nd			
Toluene	1.0	nd	73%	nd	nd	73%	91%	22%
trans-1,3-Dichloropropene	1.0	nd		nd	nd			
1,1,2-Trichloroethane	1.0	nd		nd	nd			
Tetrachloroethene	1.0	nd		nd	nd			
1,3-Dichloropropane	1.0	nd		nd	nd			
Dibromochloromethane	1.0	nd		nd	nd			
1,2-Dibromoethane (EDB)*	0.01	nd		nd	nd			
Chlorobenzene	1.0	nd	84%	nd	nd	75%	88%	15%
1,1,1,2-Tetrachloroethane	1.0	nd		nd	nd			
Ethylbenzene	1.0	nd		nd	nd			
Xylenes	1.0	nd		nd	nd			
Styrene	1.0	nd		nd	nd			
Bromoform	1.0	nd		nd	nd			
Isopropylbenzene	1.0	nd		nd	nd			
1,2,3-Trichloropropane	1.0	nd		nd	nd			
Bromobenzene	1.0	nd		nd	nd			
1,1,2,2-Tetrachloroethane	1.0	nd		nd	nd			
n-Propylbenzene	1.0	nd		nd	nd			
2-Chlorotoluene	1.0	nd		nd	nd			
4-Chlorotoluene	1.0	nd		nd	nd			
1,3,5-Trimethylbenzene	1.0	nd		nd	nd			
tert-Butylbenzene	1.0	nd		nd	nd			
1,2,4-Trimethylbenzene	1.0	nd		nd	nd			
sec-Butylbenzene	1.0	nd		nd	nd			

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AAL Job Number:	A21129-4
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/29/12

Analytical Results

8260B, µg/L		**MTH BLK**	**LCS**	**MW-1**	**MW-2**	MS **MW-2**	MSD **MW-2**	RPD **MW-2**
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
1,3-Dichlorobenzene	1.0	nd		nd	nd			
Isopropyltoluene	1.0	nd		nd	nd			
1,4-Dichlorobenzene	1.0	nd		nd	nd			
1,2-Dichlorobenzene	1.0	nd		nd	nd			
n-Butylbenzene	1.0	nd		nd	nd			
1,2-Dibromo-3-Chloropropane	1.0	nd		nd	nd			
1,2,4-Trichlorobenzene	1.0	nd		nd	nd			
Naphthalene	1.0	nd		nd	nd			
1,2,3-Trichlorobenzene	1.0	nd		nd	nd			
*-instrument detection limits								
Surrogate recoveries								
Dibromofluoromethane		124%	117%	99%	101%	104%	107%	
Toluene-d8		101%	102%	109%	105%	110%	109%	
1,2-Dichloroethane-d4		78%	77%	99%	99%	99%	95%	
4-Bromofluorobenzene		109%	99%	105%	101%	105%	99%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

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

AAL Job Number: A21129-4
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/29/12

Analytical Results

NWTPH-Dx, mg/L		MTH BLK	MW-1	MW-2	MW-2 Dupl
Matrix	Water	Water	Water	Water	Water
Date extracted	Reporting	11/29/12	11/29/12	11/29/12	11/29/12
Date analyzed	Limits	11/29/12	11/29/12	11/29/12	11/29/12
Kerosene/Jet fuel	0.20	nd	nd	nd	nd
Diesel/Fuel oil	0.20	nd	nd	nd	nd
Heavy oil	0.50	nd	nd	nd	nd
Surrogate recoveries:					
Fluorobiphenyl		112%	111%	111%	106%
o-Terphenyl		129%	118%	119%	114%

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

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

AAL Job Number:	A21129-4
Client:	Hart Crowser, Inc.
Project Manager:	Julie Wukelic
Client Project Name:	Former BMW
Client Project Number:	17859-02
Date received:	11/29/12

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	MW-1	MW-2	MW-2 Dupl
Matrix	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	11/30/12	11/30/12	11/30/12	11/30/12
NWTPH-Gx, mg/L					
Mineral spirits/Stoddard	0.10	nd	nd	nd	nd
Gasoline	0.10	nd	nd	nd	nd
Surrogate recoveries:					
Trifluorotoluene		84%	76%	84%	84%
Bromofluorobenzene		71%	72%	72%	75%

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

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

AAL Job Number: A21129-4
Client: Hart Crowser, Inc.
Project Manager: Julie Wukelic
Client Project Name: Former BMW
Client Project Number: 17859-02
Date received: 11/29/12

Analytical Results

Metals Total (7010), mg/l		MTH BLK	LCS	MW-1	MW-2	Dupl MW-2	MS MW-2
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Date analyzed	Limits	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12	11/30/12
Lead (Pb)	0.002	nd	88%	nd	nd	nd	104%
Chromium (Cr)	0.01	nd	108%	nd	nd	nd	110%
Cadmium (Cd)	0.005	nd	114%	nd	nd	nd	124%
Arsenic (As)	0.005	nd	95%	nd	nd	nd	78%
Mercury (Hg) (7470A)	0.0005	nd	74%	nd	nd	nd	108%
Copper (Cu)	0.01	nd	96%	nd	nd	nd	
Nickel (Ni)	0.01	nd	90%	nd	nd	nd	
Zinc (Zn)	0.01	nd	77%	nd	nd	nd	

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